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# ANNUAL REPORT

OF THE

New York (State)

= Superintendent of Public Works

ON THE

CANALS OF THE STATE

FOR THE

Year Ended September 30, 1908

AND ON THE

TRADE AND TONNAGE OF THE CANALS FOR THE YEAR 1908

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TRANSMITTED TO THE LEGISLATURE JANUARY 15, 1909

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# STATE OF NEW YORK

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No. 19.

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## IN SENATE

JANUARY 15, 1909.

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### REPORT OF SUPERINTENDENT OF PUBLIC WORKS.

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STATE OF NEW YORK:

OFFICE OF SUPERINTENDENT OF PUBLIC WORKS,

ALBANY, N. Y., *January 15, 1909.*

*To the Honorable the President of the Senate:*

SIR.— I have the honor to submit herewith to the Legislature as the statute requires, the annual financial report of this Department for the fiscal year ended September 30, 1908, embracing the disbursements for ordinary repairs and operating expenses; a statement of the trade and tonnage of the canals during the season of navigation of 1908; and also a statement as to the condition and the work of improvement connected therewith, under special appropriation, in progress or completed during the year ended September 30, 1908; and the expenditures on account thereof; also, a brief statement as to the special bureau work under the jurisdiction of this Department; and, lastly, a statement as to the status of work under the provisions of chapter 147 of the Laws of 1903 and the amendments thereto, being the so-called Barge Canal work.

FREDERICK C. STEVENS,

*Superintendent of Public Works.*



# REPORT.

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OFFICE OF SUPERINTENDENT OF PUBLIC WORKS,  
ALBANY, N. Y., *January 15, 1909.*

*To the Honorable the Legislature of the State of New York:*

In compliance with the statute, I have the honor to submit herewith a report as to the condition of the canals, the improvements and repairs made during the past year, and as to the moneys received and expended, as well as a statement of the trade and tonnage during the past season of navigation. In addition to the presentation of the details as to the progress of work on the so-called Barge Canal, as authorized by chapter 147 of the Laws of 1903 and the amendments thereto, I have deemed it my duty to call your attention to some of the special features of the statute as they now obtain, which seem to fail to give the State that measure of protection to which it is entitled in an undertaking of such large proportions, and I have thought it wise also to suggest the embodying, either in separate statute or in amendments to the Barge Canal Law, certain provisions whereby the State may be enabled to reap the benefits which may be incidental to this work if wise judgment and careful management shall hereafter co-operate in the executive and administrative forces having to do with the canals.

## NAVIGATION AND TONNAGE.

The Erie and Cayuga and Seneca canals were opened to navigation at noon of May 5th; and the Oswego and Champlain canals were opened on May 15th, the opening of these canals to navigation being delayed on account of Barge Canal construction work. The Black River canal was not opened to navigation until June 1st, climatic conditions making an earlier opening of this canal impracticable.



Though the Barge Canal statute contemplates a shortening of the navigation season on all the canals now undergoing improvement during the construction period, the provisions being that from November 15th to May 15th navigation shall not interfere with construction work, it being left to be inferred that from May 15th to November 15th, navigation of the present canals shall hold precedence over construction work, as a result of efforts on the part of the department, the contractors holding contracts on the Erie canal, who had formally given notice that they would hold the State to the letter of their contracts in the matter of the closing date and would require that navigation should not continue after November 15th, such contractors were induced to withdraw their demands, and with their consent navigation was continued on the Erie canal to November 30th at midnight to the great benefit of boatmen, forwarders and shippers.

The Cayuga and Seneca canal and Black River canal, not being under improvement, were operated also up to December 1st, but in the case of the Oswego and Champlain canals the conditions of the contract work underway was such as that the demands of the contractors for the shutting down of navigation on November 15th had to be complied with. It is probable however that from now until the completion of the Barge Canal, the work underway on the Erie, Oswego and Champlain canals will be in such condition as to absolutely prevent the possibility of an earlier opening than May 15th or a later closing than November 15th.

The total tons carried on all the canals for the year was 3,051,877 tons, as against 3,407,914 tons in 1907; 3,540,907 tons in 1906; 3,226,896 tons in 1905; and 3,138,605 tons in 1904. The total tonnage carried was divided between the canals as follows: Erie canal, 2,177,443 tons; Champlain canal, 614,762 tons; Oswego canal, 92,831 tons; Cayuga and Seneca canal, 81,029 tons; Black River canal, 85,812 tons.

The tonnage on all canals was made up as follows: Way freight east, 1,805,554 tons as against 1,946,357 tons in 1907; way freight west, 554,257 tons as against 622,301 tons in 1907; while the through eastern shipments amounted to 428,814 tons as against 547,487 tons in 1907, and through western shipments of 263,252 tons as compared with 291,769 tons shipped west in 1907.

The shipments on the Erie canal were made up as follows: Way freight east, 1,309,391 tons, and way freight west, 400,290 tons, making total way shipments east and west, of 1,709,681 tons, as compared with 1,850,257 tons of way shipments in 1907; while the through shipments consisted of 332,587 tons shipped east, and 135,175 tons west, making a total through shipments, east and west, of 467,762 tons as against 565,291 tons of through shipments in 1907.

The total decrease in tonnage over the previous year, namely, 356,037 tons, was made up of a falling off on Erie canal shipments, of 238,105 tons; on Champlain canal, 63,744 tons; on Cayuga and Seneca canal, 31,541 tons; and on Oswego canal, 50,446 tons; while, on the other hand, the Black River canal shows a gain over 1907 of 27,799 tons.

The total mileage of boats on all canals was 1,644,156 as against a total mileage of 1,815,386 in 1907, with an estimated total value of \$54,511,509, as compared with the estimated total value in the previous year of \$63,903,970.

Some of the important items going to make up the total tonnage were: Wheat, 183,667 tons as against 251,776 tons in 1907; boards and scantlings, 358,959 tons as against 526,319 tons in 1907; barley, 48,009 tons as against 92,102 tons the previous year; hemp, 2,285 tons as compared with 10,077 tons last year; anthracite coal, 358,572 tons as against 430,750 tons in 1907; and bituminous coal, 140,209 tons as compared with 162,249 tons last year.

The commodities in which there were increased shipments were: Pig iron, of which there were carried 19,171 tons as against 5,045 tons in 1907; sugar, 40,056 tons as against 26,834 tons last year; stone, lime and clay, 1,053,759 tons as compared with 994,250 tons carried in 1907.

Appended hereto will be found tables showing the details of shipments on all of the canals.

While this is the lightest season in point of tonnage during the last fifteen years, it was by no means the least prosperous season from the standpoint of the boatmen's profits, since the rates charged by boatmen, and quite generally acceded to by shippers,

were the highest known in years, if not in the history of the canals.

At the opening of the season a rate of five cents per bushel on grain from Buffalo to New York was fixed, and it is altogether likely that this rate, deemed by shippers to be excessive, was to an extent responsible for the light tonnage during the forepart of the season, as during the first two months of navigation very few grain boats cleared from Buffalo, the owners preferring to lay up in the harbor rather than to accept a price less than had been fixed by the Erie Boatmen's Union, an organization formed and maintained in the interests of the boatmen.

Later there was a cutting of prices on the part of boat owners who were outside the Union, and the grain carrying, up to mid-July, was almost wholly limited to the so-called non-union boats. The record of clearances shows that the boats classed as "non-union" were able to make six round trips during the season, whereas a larger number of other boats were able to make but three round trips. The net result of this was the diversion of a large amount of tonnage to the railroads which should have gone to the canals.

It is estimated by boatmen themselves that at least a million tons of freight were lost to the canals and gained by the railroads as a result of these internal dissensions on the part of the boatmen.

Aside from a slight break in the Erie canal, just west of Rochester, soon after the opening of navigation, which required about forty-eight hours to repair, and one more extensive near Fairport on May 28th which required six days to repair, there was no detention to navigation on account of breaks on the main canal; though there was a slight interruption to through traffic on the Oswego canal after its formal opening, due to a coffer-dam on Contract No. 35 at Oswego, and to a new Bascule bridge in progress of construction at Salina street, Syracuse.

As an indication of the increasing use of the State canals for pleasure purposes, I would state that during the year just passed 1,700 permits were granted to pleasure craft to navigate the canals, as compared with 1,405 granted in 1907; 1,150 in 1906, and 950 in 1905; being an increase of nearly 100 per cent. in but four years.

## NAVIGATION BUREAU.

The fees for inspections and licenses collected by the inspectors of steam vessels, under authority of chapter 359 of the Laws of 1905, amount to \$3,830 as compared with a total of \$3,294 collected in 1907 and \$3,381 in 1906.

The number of vessels inspected by the Bureau during the year was 266, of which 126 were found to be in need of repairs and equipment to meet the requirements of the law, the certificates being withheld until all requirements were fulfilled. Vessels withdrawn and undergoing repairs numbered 34.

Licenses were issued by the inspectors to 447 engineers, masters and pilots.

SPECIAL EXAMINER AND APPRAISER OF LANDS  
TAKEN FOR BARGE CANAL PURPOSES.

Chapter 195, passed by the last Legislature, provided for the appointment by the Governor of a single official to be known as the "Special Examiner and Appraiser" in the matter of lands taken for Barge canal purposes to take the place of the board of three members which had heretofore existed.

Under the provisions of the law, the special examiner and appraiser must visit and inspect all lands, structures, waters, and other property rights appropriated by the State pursuant to the Barge Canal Law, either upon the application of the owner or his own initiative, and may agree with such owners on a price to be paid by the State for the property taken. In case the agreements entered into by the special examiner with the owners of lands prove satisfactory to the Superintendent of Public Works, they are transmitted by the latter official to the Canal Board with his recommendations, this course being productive of much saving to the State in the way of avoiding the filing of claims and the expenses attendant on long litigation, as well as insuring to owners for lands taken reasonably prompt compensation.

During the year 1908, the number of contracts made with owners of lands and other property taken for Barge canal purposes, without the filing of claims, was 102, having a total of \$198,912.60, covering appropriations made in connection with eighteen

different contracts for Barge canal construction work. The total of agreements made with land owners since the inception of the work to December 31, 1908, is \$745,092.33.

### BUREAU OF CLAIMS.

The results attained by this bureau in the matter of claims brought against the State on account of the canals have been very satisfactory. The prompt and thorough investigations conducted by the bureau, not only upon receipt of notice by the Superintendent of Public Works of the intention to file a claim, but even previous to such notice when by reason of overflow or leakage from the canal or accidents in connection with or upon the same, the filing of claims was anticipated, have resulted in reducing the amounts recovered from the State to a point that is only just and reasonable.

During the year just passed there was a total of 394 cases disposed of. Of this number 332 were for damages on account of leakage, overflow, personal injuries and permanent appropriations in connection with the present canal, and aggregated in amount, \$296,249.32, while the total sum recovered by the claimants was only \$36,465.38, or less than 12 per cent. of the amount asked for. The remaining 62 claims were brought on account of the construction of the new Barge canal, the total amount asked being \$529,196.75. Awards, aggregating \$190,436.12, already have been made in the case of 22 of these claims, while the final settlement of the remaining 40, with an estimated total of \$81,333.90, is awaiting the action of the Attorney-General in the matter of approving the necessary abstracts of title to the lands affected. It will thus be seen that the total of amounts recovered in 1908 on account of the Barge canal construction is \$271,770.02 as compared with a total of \$529,196.75 asked for, a reduction of about 50 per cent. Included in the \$271,770.02 recovered on account of the Barge canal is the single award made to the contractor for Barge Canal Contract No. 5, in amount, \$97,582, on account of the elimination of certain work from his contract made necessary by the passage of chapter 710 of the Laws of 1907 which changed the alignment of the portion of the canal included in Contract No. 5. The total amount asked for in this claim was \$157,631.50.

Of the 332 claims brought against the State on account of the present canal and disposed of during the year 1908, 62, with a total of \$103,105.40, were dismissed without any recovery whatever, 18 being dismissed by the Court of Claims after trial and 44 being withdrawn before trial as a result of the facts and data collected by the bureau to be used in the defense of the State on the trial of the actions. The claims tried included 11 brought on account of personal injuries alleged to have been sustained, having a total of \$79,195, while recoveries were had in but two of these, with a total of only \$2,365.50. The total of the nine claims dismissed was \$59,195.

As to the claims brought on account of leakage from the Erie and Champlain canals, which were disposed of during the past year, the recoveries in the Erie canal claims amounted to only \$6,933.91, the total asked for being \$45,892.48, while on the Champlain canal but \$295 was recovered where the claims amounted to \$1,716.

The number of claims filed against the State during the year 1908 on account of canals, exclusive of those brought in connection with lands taken for Barge canal purposes, is 115, as compared with a total of 243 filed in 1907 and 492 in 1906. This great reduction in the number of claims filed is mainly due to the work conducted by the department during the last several years in cleaning out ditches along the Erie and Champlain canals, which had become filled as a result of the nine million improvement work. In a great many cases the department was able to secure releases from owners of property adjacent to these ditches, without any payment from the State, the only condition being the progress of the cleaning-out work which already had been decided upon by the State.

The amendment to the Code of Civil Procedure, passed by the Legislature of 1905, reducing the time in which notices of claims shall be filed from two years to six months, doubtless also had the effect of reducing the number of claims to be filed; and it is believed that the watchfulness on the part of employees of the department, due to the exaction of daily reports as to water conditions, has contributed greatly not only to reducing the number of



claims, but also it has been of great assistance in defending claims and in reducing the amount of awards.

### BLACK RIVER CANAL.

The better showing on the Black River canal for the past season is due to the moulding sand industry which has developed at Forestport and between Forestport and Boonville. There is practically no traffic, as there has not been in several years, north of Boonville, and what is to be done with that portion of the Black River canal on which traffic has practically ceased is still an important problem.

It being the declared purpose of the State to maintain and improve its waterways rather than to abandon any portion of the same, some adequate provision should be made for extensive improvement of this canal.

To place that portion of the Black River canal, between Rome and Boonville, in a thoroughly safe and proper navigable condition to meet the growing demands which industrial development of this section would seem to warrant, will cost \$75,000, and I recommend that this amount be appropriated and made available for use the present year.

To restore that portion of the Black river, between Boonville and Lyons Falls, to a navigable condition, will entail the reconstruction of locks, the bottoming out of the prism, the reconstruction of sluices and other work, costing in the neighborhood of \$100,000. Therefore, unless this portion of the canal is to be abandoned and the State thus relieved from the necessity and pretence of maintaining navigation where navigation is not possible, the Legislature should make provision in the near future by appropriating \$100,000 for restoring this portion of the canal.

### OSWEGO CANAL.

I deem it my duty to speak particularly of the conditions obtaining on the Oswego canal as they relate to Barge Canal construction.

Under the provisions of the Barge Canal Act, it is a duty to maintain navigation on this waterway between May 15th and No-

vember 15th, though it is believed that all who have intimate knowledge of the conditions would be agreed that this is only being accomplished at a great sacrifice on the part of the State, due to the greater difficulties which are imposed upon the Barge Canal contractors. While the contractors, of course, are obligated not to interfere with navigation between the dates referred to, the contracting and engineering problems which must be worked out are so difficult in themselves as to challenge the judgment and wisdom of all the engineers who have intimate relations to this work, if not actually to confound them. This condition if maintained will in the end, I believe, render the cost of the Oswego canal much more expensive to the State, will postpone the completion date, and, what is quite as much to the point in importance, will render the resulting finished canal much less satisfactory.

When all these facts are placed by the side of the tonnage claim of the Oswego canal, in my judgment the only conclusion which can be reached is that your honorable body should make provision for so amending the statute as that at least there shall be no obligation on the part of this department to maintain navigation on the Oswego canal during 1909. If this course is taken, there may be individual interests which temporarily may be made to suffer, but even these individual interests are so bound up with the improved canal as that the benefits which will result from an earlier completion will offset many fold the present-time detriments.

### SOME CANAL BETTERMENTS.

Much has been accomplished during the last calendar year, not only in the way of rendering more substantial the permanent structures whose integrity is essential to the navigation of the canals, but also in the way of improving navigable conditions and rendering less difficult boating on the canals.

Among the more important and permanent structures to be replaced is the aqueduct at Durhamville, which carries the waters of the Erie canal over Oneida creek, and which was authorized by chapter 672 of the Laws of 1906. The integrity of the old structure, as is well known, was under grave suspicion for more than twenty years, and much relief was felt not only by the officials

having to do with the maintenance of navigation, but particularly by boatmen, forwarders and shippers when the usual date for opening navigation on the Erie canal saw the structure so far advanced that no delay to traffic resulted.

Owing to many difficulties encountered on the part of the contractor, particularly in securing the foundations, it was not possible to complete the concrete work in time to make it safe to remove the forms when the date arrived for filling the canal, but in order that no delay might result to navigation, a timber trunk was quickly provided so that navigation was established at this point, and that in a manner which did not in any way interfere with the final completion of the structure.

During last winter also there was a general overhauling of locks both on the Erie, Cayuga and Seneca and Oswego canals, and, on the Glens Falls feeder, the work of grouting the bed and sides of the canal through the porous rock cut where so much trouble has been experienced for so many years, not only on account of the loss of water through the seams in the rock, but from the damage thus resulting to private property, went forward. It is planned to continue this work during the coming winter and to practically complete the lining with concrete of this feeder.

At one time it had been planned in connection with the Barge Canal construction work to remedy the difficulties in this feeder by placing a timber trunk through the rock seam district, but this method would have been far more expensive and less satisfactory than the one which has been provided, and by thus early providing it the water is not only conserved for the use of the present canals and damages to private property by seepage stopped, but an improvement furnished which will be a very valuable adjunct to the new canal, since the waters of the upper Hudson which must be depended upon for navigation on the higher levels of the improved Champlain, must find their way through this feeder.

During the summer, in addition to minor repairs, the department paid particular attention to the rebuilding, graveling, rolling and cross-ditching, of the towing-path, this being a continuance of the improvement which was started several years ago; and I think it may be said without question that not since the

opening of the canals has there been a time when the towing-path was in as good condition as it is to-day.

As a protection to the improved towing-path, the department has enforced the provisions of the statute which prohibit the use of the towing-path for highway purposes.

A good towing-path is quite as essential and quite as much an advantage to boatmen as a good highway when the interests of highway traffic are consulted, a good towing-path contributing not only to the speed of boats but also lightening the burdens of stock, and therefore of the boatmen.

In line with the policy which the department previously adopted of reconstructing piers and breakwaters which had become dilapidated as a result of years of existence, the pier and breakwater at the outlet of Cayuga lake at Cayuga, N. Y., was reconstructed with concrete.

#### WORK DONE UNDER SPECIAL APPROPRIATIONS.

Of the work authorized by the Legislature to be done by the department, where special appropriations were provided, I would state that the work of constructing a highway between South Colton and Piercefield in St. Lawrence county; the construction and improvement of the North Lake road from Forestport to North Lake; the repair of the Beaver River dam at Stillwater; the repair of the bridges over Twitchell creek; the removal of dead and floating timber in Saranac river, between Lake Flower and the State dam; all as authorized by chapter 466 of the Laws of 1908, has been completed; the work being done by the department forces.

In addition, the improvement of Indian roads, as authorized by the same chapter, has gone forward, the work having been done by the department and made of as permanent a character as possible.

The so-called Lewiston-Dickersonville road in Niagara county, which was being constructed in accordance with the Higbie-Armstrong Law, was found to cross the Tuscarora Indian Reservation, and inasmuch as such portion — about one-half mile in length — as was within the reservation, could not be constructed under the Higbie-Armstrong Law, and as it was desirable that the improve-

ment should be continuous, I adopted the Higbie-Armstrong Road specifications for the reservation section and placed the same under contract, the work having been accomplished before the completion of the adjoining sections.

Other work done by the department forces consisted of the repair and extension of the sea wall at the foot of Owasco lake, as authorized by chapter 282 of the Laws of 1908, and the inauguration of the work of widening and deepening the Cayuga Inlet at Ithaca, as authorized by chapter 267 of the Laws of 1908. This latter work will be carried forward next season, the work being resumed as soon as weather conditions will permit, and it is believed it will be brought to completion within the present calendar year.

The construction of a steel bridge over the Champlain canal at Mohawk street, Waterford, as authorized by chapter 265 of the Laws of 1908, was placed under contract, and the structure is at present nearing completion.

The work of repairing the State pier at the outlet of Cayuga lake at Penn Yan, as authorized by chapter 266 of the Laws of 1908 and chapter 483 of the Laws of 1906, and the work of building a pier in Seneca lake at Dresden, has been completed by contract.

The work of constructing a protection wall on the west side of Skaneateles Lake Outlet in the village of Skaneateles, Onondaga county, as authorized by chapters 675, 400 and 394, of the Laws of 1906, 1907 and 1908, was placed under contract, and is nearly completed.

Work which has just been placed under contract includes the construction of a lift bridge over the Erie canal at Lyell avenue, Rochester, as authorized by chapter 287 of the Laws of 1908, the contract calling for its completion by May 1, 1909; the construction of a lift bridge over the Erie canal at Allen street, Rochester, as authorized by chapter 291 of the Laws of 1908, the completion date being June 1, 1909; and the construction of a plate girder bridge over the outlet of Cazenovia lake at Mill street in the village of Cazenovia, as authorized by chapter 281 of the Laws of 1908, the contract providing for its completion by May 1, 1909.

This leaves of the work authorized by the last Legislature, not

completed nor underway, the construction of a bridge over the Cayuga and Seneca canal at Ovid street, Seneca Falls, as authorized by chapter 273 of the Laws of 1908, plans for which at this writing not having been completed by the State Engineer and Surveyor; the reconstruction of Breakwater "D" at Watkins, as authorized by chapter 264 of the Laws of 1908, which is to be undertaken by department forces early the coming season; and the completion of the dyke along the north bank of the Chemung river near Columbia street, Elmira, and the dyking of the banks of Hoffman creek, as authorized by chapter 406 of the Laws of 1908, which work was not inaugurated for the reason that after making a careful examination of the conditions it was found that the appropriation of \$5,000 was not nearly sufficient for accomplishing what was prescribed by the act to be done, and therefore it was felt that to inaugurate the work with this knowledge would be a direct violation of the so-called Higgins Finance Law. The same conditions prevented the inauguration of the work of arching over and improving Eighteen Mile Creek from East avenue to Pound street, Lockport, as authorized by chapter 466 of the Laws of 1908, it being found, upon the completion of the plans by the State Engineer, that only about one-half of the work called for could be completed within the appropriation. In the case of the latter improvement, an additional appropriation of \$5,000 is earnestly recommended.

One additional improvement accomplished as a result of the efforts of the department, though not at State expense, was the reconstruction of the New York Central tunnel under the Erie canal, just east of Syracuse. This work was inaugurated soon after the close of the season of 1907, and was brought to completion previous to the opening of navigation the past season, the construction consisting of concrete abutments, carrying the steel trunk. The old structure had been regarded as a menace for a great many years, and with the completion of the new, all apprehension as to the structure was removed.

#### BARGE CANAL WORK.

While a somewhat better progress in actual construction work by contractors holding contracts for Barge Canal improvement



has obtained during the past calendar year than during the previous year, with the exception of the work upon two or three important contracts, even the acceleration is not such as to promise a completion of the work under contract anywhere within the contractual period.

There is still painfully evident upon several of the contracts a lack of experience on the part of contractors and a lack of appreciation of the needs both in the way of plant and machinery, as well as human energy, all of which tends to discouragement and delay.

By reason of the relation which the Superintendent of Public Works bears to the contract work, the public, to some extent, and the canal interests which should be better informed, also, to some extent, have looked to the Superintendent of Public Works for explanation and remedy. I have endeavored to give the explanation which carries with it a rather pointed suggestion that the remedy does not lie in the hands of the Superintendent of Public Works. Since all the initiative both as to original plans, as to changes and modifications in plans and specifications, and as to direction of work, under the statute, rests with the State Engineer and Surveyor under specific provisions of the statute, the initiative in any case must be taken by that official.

There are a number of contracts, work on which has gone forward so unsatisfactorily, notwithstanding repeated complaints and lecturing of the contractors, as to suggest the wisdom of applying the machinery provided by statute in such cases, and I have gone to the full extent of my powers in such cases when I have advised the State Engineer and Surveyor that the remedies were in his hands and that I would co-operate with him if he saw fit to apply them. I refer to the provisions of section 7 of chapter 147 of the Laws of 1903, wherein it is stated:

"If in the judgment of the State Engineer the work upon any contract is not being performed according to the contract or the best interests of the State, he shall so certify to the Canal Board, and the Canal Board shall thereupon have power to suspend or stop the work under such contract while it is in progress and direct the Superintendent of Public Works, and it shall thereupon become his duty, to complete the same in such manner as will

accord with the contract specifications and be for the best interests of the State, or the contract may be canceled and readvertised and relet in the manner above prescribed, and any excess in the cost of completing the contract beyond the price for which the same was originally awarded shall be charged to and paid by the contractor failing to perform the work."

This remedy of course is a drastic one and not to be used except in extreme cases, but since there is no intermediate remedy or one less harsh, it is my judgment that it should have been applied in at least one or two cases, and there is little doubt that had it been applied in such one or two cases, the moral effect upon other contractors would have been very great and would have worked to the State's advantage so far as an earlier completion of the new waterways is concerned.

The Barge Canal statute is very specific in those clauses which have to do with planning and directing the work. There is no division of authority, though an indifferent reading of the act might give a different impression. Where authority is lodged, there must lie all responsibility.

In a project like this there must be intelligent co-operation between public officials on the one hand, and on the other between the public officials and the general public. The general public can do much in the way of assisting, but it can accomplish the most if it shall carefully inform itself of the true conditions, of the remedies provided by statute and of the machinery which must be placed in motion if the remedies shall be intelligently and aggressively applied.

Speaking specifically of the condition of the progress of the work, there was under contract on December 31, 1907, work to the amount of \$22,173,773, since which date there has been placed under contract work amounting to \$13,421,771, making a total of work under contract to December 31, 1908, of \$35,595,544. The total amount paid to contractors during the past year was \$4,707,097.20, while the total payments to contractors on account of all work up to December 31, 1908, was \$7,526,265.07.

Up to December 31, 1908, there was a total of 37 contracts awarded for Barge Canal work, 16 of which were awarded during

the year just passed. These contracts were: Nos. 9, 13 (17 being work left uncompleted when abandoned by former contractor), 26, 31, 40, 41, 45, 46, 47, 55, 60, 61, 64, 66, and 68.

One feature of the Barge Canal work as it affects present navigation was that called to your attention in my annual report of last year and your consideration was invited. I refer to the increasing difficulty of maintaining navigation on the present canals during the construction period particularly at such points as the new canal follows the alignment of the present canal.

I do not think it necessary to emphasize the necessity, not only for present considerations but for future canal interests, of maintaining navigation and giving facilities to all traffic which may offer itself within the shortened period already provided by law, particularly on the Erie canal, but if there is going to be no actual lapse in waterway traffic in the transition from the old canals to the new, there will need to be a careful study of the problem involved, by your honorable body, and provision made for applying the remedies which you shall deem to be necessary and proper.

The conditions suggested are certain to arise, and a decision as to the policy which the State proposes to pursue with reference to this question can not be very long delayed.

#### SUGGESTED MINOR CHANGES IN THE BARGE CANAL LAW.

In so large an undertaking as the Barge Canal construction it can not be expected that the authorization act could be so broad of comprehension or so much in detail as to safeguard every public interest, or as to provide each separate piece of machinery essential to carrying the work to a final conclusion. Time, experience and development must be depended upon to suggest changes, amendment and additions to such an act. Several amendments of a minor character would seem to be clearly in the interests of the State and are therefore herewith suggested.

Chapter 147 of the Laws of 1903 provides specifically for the appropriation of land needed for Barge Canal purposes but it leaves it to the general law to provide a way and a means for the abandonment of lands taken for canal purposes. It could not have

been foreseen that in so great an undertaking plans might be adopted involving the taking of certain land, and the appropriations having been made, that later, wisdom and necessities should dictate such a change in plans as to render some portion of the land already taken as unnecessary in connection with the construction work. Experience has shown that this very condition does develop, and I would therefore recommend that the law be so amended as to provide an easy method for releasing to the former owner land so taken for Barge Canal purposes, which it shall appear later is not needed for the improvement. If this shall be done, it is my belief that the ultimate cost for right of way will be very materially reduced. Such an amendment should be retroactive in its application in order to be of full value to the State.

Another feature met with in connection with this improvement is the encountering of material upon the contract site which is useless to the State upon that site, but which if the law specifically authorized might be disposed of in connection with work on adjacent contract or to the general public at advantageous prices. I believe it would be in the interest of thrift, economy and good business judgment, therefore, if your honorable body shall provide an amendment to this law which shall specifically authorize the Superintendent of Public Works to dispose, by sale, of any material, article or thing which shall be discovered, uncovered or encountered in connection with the progress of this work or with the taking of land or property and which is incidental to the taking of such land and which shall not be needed in conjunction with the work proper.

There is another important matter which, though not perhaps in the form of an amendment to the Barge Canal Law, is closely related to this work and which should be given careful attention to the end that the State shall not be the victim of abuse by corporations which itself either created or authorized to do business within the State. I refer to the bonding and indemnity corporations which have found a very lucrative business in connection with surety on bonds of the Barge Canal contractors.

At the inception of this work and before its gigantic proportions and field for operations had been fully realized by such corpo-

rations it is understood that bonds were written at a rate which was considered fair to the contractor, just to the State and yet profitable to the surety companies.

With the increase in the number and size of the contracts, there has been experienced an increase of difficulty by the contractors in securing surety by bonding companies at rates and under conditions which would not be considered either prohibitive or at best exceedingly oppressive.

While in the case of the first few contracts the risk, as it is understood, was taken at a flat rate and specified sum for the life of the contract, latterly by seeming co-operation on the part of the surety companies, there has been exacted an annual premium, so that while the actual risk or hazard in any given case is not greater in the event that the life of the contract is spread over a series of years, as most of them are, than it would be if a shorter period or a single year were specified for doing the work, and in effect not so great a risk, the cost to the contractor is multiplied by the number of years covered by the contract period.

In the case of a contract, say for \$3,000,000 spread over a period of five years, and where at the end of three years the actual risk or hazard to the company would almost totally disappear, the same annual premium for the accommodation is continued to the end.

This is a matter which might be left to be settled between the contractor and the surety company but for the fact that in the end the State is the one which must pay the premium, be it excessive or otherwise. A contractor, when he prepares his bid, has knowledge of the fact that a bonding company must be provided as surety. He has foreknowledge of the rates and the terms, and so multiplying the rates based on the amount of his estimate of the cost of doing the work, and again multiplying by the number of years embraced in the proposed contract period, he arrives at the total cost for surety and adds this amount to his proposal.

For this reason, to my mind, it becomes a subject which might legitimately be taken up and dealt with by your honorable body, and to the end that the abuses for which the State in the end must otherwise suffer, may be prohibited, I recommend such legislation

as shall enable the State to secure proper surety on bonds to be exacted in connection with this work upon a basis which shall be right, fair and just to the State.

If the Legislature, upon careful consideration, finds that it has not the power to so regulate corporations of its own creation as shall insure fair, just and equitable treatment where the State's interests are the immediate interests, I would recommend such an amendment to the Barge Canal Law as would enable the State to accept collateral security in such cases.

One other amendment which suggests itself as desirable relates to the appropriation of land. The existing statute (see section 4) authorizes the State Engineer and Surveyor to "enter upon, take possession of and use lands, structures and waters, the appropriation of which for the use of the improved canals and for the purposes of the work and improvement authorized by this act, shall in his judgment be necessary." This, however, confines the State Engineer and his operations to the lands and structures needed for the immediate use of the canals, for spoil areas, borrow pits, etc.

The Legislature already has taken some account of the valuable water powers which incidentally will be created in connection with the dams and other structures constructed as a part of the Barge Canal, and upon my recommendation, the Legislature of 1907 passed what has become chapter 494 which is intended to conserve such water powers and to preserve them for the State's use, benefit and profit.

Looking to a full and free return of all the advantages, material and otherwise, which may accrue to the State as the result of such constructions, and as the result of the prohibition against disposing of any of the rights connected therewith until the canals shall have been fully completed and until thereafter legislation shall be had setting forth specific terms, conditions and restrictions governing the disposition of such rights, as it is recited in the act referred to, I believe the Barge Canal Act should be so amended as not only to authorize but direct the State Engineer, in addition to entering upon, taking possession of and using "lands, structures and waters, the appropriation of which for the use of the improved canals and for the purposes of the work



and improvement authorized by this act, "shall in his judgment be necessary," to enter upon, take possession of and use, as is therein provided, such lands and structures adjacent to or surrounding any dam or dams, mole or moles, reservoir or reservoirs, or other structures connected therewith, which may be considered necessary to the utilization and full control by the State of the waters impounded, created and to be discharged as the result of the construction of any such dam, mole or other structure.

If this step shall be taken at the present time, the aggregate of cost will be slight in comparison with the ultimate cost, if the taking of the property necessary to fully control and dispose of the impounded waters shall be delayed until the completion of the canal and its structures, and the added increment which must result to such surrounding property by reason of the State's operations.

Section 3 of chapter 147 of the Laws of 1903, after prescribing the route that shall be followed by the Erie, Champlain and Oswego canals, provides that "new bridges shall be built over the canals to take the place of existing bridges wherever required, or rendered necessary by the new location of the canals."

The cost of constructing such new bridges is a very large item in the aggregate since, while the cost of constructing bridges other than highway and street bridges, which the State already is obligated to maintain on such portions of the new canal as follow the line of the present canal, will not be a direct charge against the State, the expense of constructing bridges other than street and highway, being those maintained by railway companies on such portions of the new canal as do not follow the line of the present canal, will fall directly on the State excepting in individual cases.

Already settlements have been made with railway companies on account of damages resulting to such companies from being compelled to construct and maintain bridges where heretofore no such structures were required, the Attorney-General having ruled that in such cases settlement must be in full for all damages, the railway companies constructing their own bridges rather than that the State should construct and maintain the bridges for the benefit of such railways.

There is one way whereby it may be possible to minimize the cost to the State on account of the construction and maintenance of these railway bridges. In many cases the alignment of the new canal is parallel to the present canal so that, while the railways in such cases will be put to the expense of constructing and maintaining bridges over the new canal, the expense of maintaining bridges already built over the present canal at such points will cease ultimately, since the railways will be permitted to construct embankments to take the place of such bridges. It therefore seems but just that the statute should be so amended as that these equities shall be taken into consideration in connection with settlements with railway companies on account of the construction of such new bridges as are authorized to be constructed by section 3, above referred to.

I would therefore recommend that section 5 of chapter 147 of the Laws of 1903, which prescribes the method whereby lands now used for canal purposes shall be abandoned when no longer needed for canal purposes be amended, by adding some clause which shall provide that where bridges have heretofore been erected by any person or corporation across canal lands to be abandoned as herein provided, and where the State shall have made compensation to them on account of the expense of constructing bridges for their use in crossing the new route provided for in this act, those portions over which such bridges extend shall not be sold, nor shall it be lawful for such person or corporations or their successors, grantees or assigns, to cross such abandoned canals by structures at grade or on embankment until such compensation as the Canal Board shall deem equitable shall be paid into the State treasury by the persons or corporations to whom the State has made compensation as aforesaid or by their successors, grantees or assigns; and that in like cases, similar payment shall be required before it shall be lawful for any person or corporation to cross the beds of navigable streams or of streams the property of the people of this State by structures at grade or on embankments.

It would be well to include a provision also that the money so paid into the State treasury should be applied as are other

moneys received in like manner, that is, to the benefit of the canals.

### TERMINALS

Though the time when the new waterways shall be ready to be placed in actual commission is not so near at hand as might be wished for, it is my belief that this is none too soon for a careful study of the question as to providing suitable terminals, particularly, at New York and Buffalo.

Any consideration of the question as to the demonstrated utility of waterways must necessarily, I believe, lead to the conclusion that terminal facilities contribute most materially to actual success. For the purpose of a brief consideration, canals may be divided into separate classes.

First: Those like the "Soo" canal where no traffic originates and which connect great bodies of deep and free waterways;

Second: Those whose size makes the transshipment of cargoes unnecessary; and

Third: Those whose character and location is such as to necessitate transshipment.

Where a canal of the latter class is found to be paralleled by a railroad, it will be found that the canal has been largely superseded by the railroad, and if the reason is to be inquired into, it will be found that while the railroads have paid proper attention to terminals, the canals have not.

Adequate terminals are prerequisites to the proper handling of traffic, and any waterway which falls within the third division described above and which does not possess terminal facilities, will almost certainly be doomed to failure.

The importance therefore of providing adequate terminals for the Barge Canal should not be overlooked nor should the question of providing a solution of this problem be too long delayed.

### REGULATION OF ELEVATOR AND CARRYING CHARGES.

If the canals of New York State are to be the instrument for the regulation of freight carrying charges and for preventing extortionate rates by railways, which their designers have intended, and if they are to play an important part in restoring to

the State, and increasing, its commercial supremacy, as hoped for, there must in time be such regulation, not only of canal rates but also of terminal charges as shall prevent the greed of private interests from defeating the State in its main purpose.

In any system of waterways which involves the breaking of bulk, the terminal charges play an exceedingly important part and may be so great as to completely nullify the effect which otherwise would come from the maintenance of the free system of waterways.

As is well known, all through freight from the west, which comes to the canals at Buffalo, must break bulk at that point. The terminal charges at Buffalo, while they may vary from year to year, are said to average about as follows: Elevation of grain,  $\frac{5}{8}$  of a cent per bushel; storage,  $\frac{1}{4}$  of a cent per bushel, for ten days or less; making total of  $\frac{7}{8}$  of a cent per bushel. There is said to be a further charge in the case of loading from elevators, as follows: Loading cars,  $\frac{1}{4}$  of a cent per bushel; running to side bins with team,  $\frac{1}{4}$  of a cent per bushel; blowing grain,  $\frac{1}{8}$  of a cent per bushel. There is a further charge of so-called "trimming," for which the charge is usually about \$3.50 for 1,000 bushels.

For years at Buffalo the handling of grain, including the elevation storage and reloading, has been under control of a combination which thus far has been able to escape all interference other than the fixing by statute of the maximum rate for elevation and storage.

It is nigh impossible to procure definite information as to the details of terminal charges in the harbor of New York, but that here the same abuse as at Buffalo exists, no one who makes inquiry can doubt.

When in 1882 the toll system was abolished and the canals made free, it was thought that this action would result in restoring to the canals their former importance. Almost immediately, with the making of the canals free, the combination of elevator interests was conceived, and this of itself has undoubtedly gone very far toward defeating the ends which were sought when the toll system was abolished. The demands of the elevator interests had become so great in 1888 that a remedy was sought in the

passage of what became chapter 581 of the Laws of that year. This act fixed the maximum rate to be charged for elevating, receiving and weighing grain at  $\frac{5}{8}$  of a cent per bushel. Earnest effort was made to invalidate this act but it was held to be constitutional, and it is still in force. It is under this act that the elevator interests fixed the rate of  $\frac{5}{8}$  of a cent per bushel for its services, the price always being maintained at the maximum.

There are many who believe that this abuse can be overcome only by the establishment of State elevators, which shall charge the actual cost of operation for the services rendered. This would be applying to this problem the method that has been advocated by some for correcting abuses practiced by railway companies. The policy thus far declared not only by the State but by the Federal Government is against State and Federal ownership of railways, and in favor of State and Federal control.

The State already has stepped in between the public and private interests charged with practicing extortion, and has assumed to fix the maximum rate which may be charged by railways for service, and by gas and electric companies for their commodities. The basis on which the State has assumed to enact these regulating statutes is that the companies and corporations affected receive their permission to exist from the State. While the so-called elevator "combine" may contend that it holds no corporate existence, nevertheless it is a fact that its existence, as well as its profits, result from the State's liberality in maintaining free waterways.

That there may be proper supervision of terminal and elevator as well as navigation charges, I would recommend such legislation as will give the Public Service Commission the same authority to fix and determine all elevator, storage, loading, grain-blowing and "trimming" charges, as well as through carrying rates, as it now possesses to regulate railway carrying charges.

If such power of supervision, as is suggested, shall be given to the Public Service Commission, not only will it be possible to put an end to terminal abuses, but it will be impossible to maintain any combination for governing rates as shall constitute a restraint of trade. Such a combination, whether with or without corporate authority, is genuinely harmful to the spirit for which

the canals are maintained, and without some such supervision and restraint there is danger of such growth and development of the system as will be vitally dangerous to the improved canal system.

### IMPROVEMENT OF THE CAYUGA AND SENECA CANAL.

The improvement of the outlets of Cayuga and Seneca lakes in such manner as to render both of these so-called finger lakes ultimately a part of the Barge Canal system is such a natural part of the policy on which the State has entered in connection with the improvement of her waterway system, and so easy of accomplishment, that the wisdom of making immediate provision for taking such step will, I believe, appeal to every friend of the inland waterway system who shall give the matter careful study, and to this project I earnestly invite your attention and recommend definite and favorable action.

This undertaking has been rendered the more easy of accomplishment as a result of the change in the alignment of the canal as originally provided for at the point where the so-called Montezuma marshes are crossed, and which change of alignment, as authorized by chapter 710 of the Laws of 1907, has already been adopted. This new alignment causes the Barge Canal to take a more southerly course beyond the so-called Jack's Reef, the Seneca river being followed to its intersection with the Clyde river. This brings the Barge Canal within about four miles of the foot of Cayuga lake.

To connect Seneca lake, would entail the canalization of the Seneca river from the so-called Mudlock of the present Seneca canal to Geneva, a distance of about thirteen miles.

By thus improving these outlets the splendid waters of both Cayuga and Seneca lakes would themselves add practically eighty miles of deep waterway to the canal system, and besides accommodating the important manufacturing towns and villages along the outlets and along the shores of the lakes, would bring Ithaca, at the southerly end of Cayuga lake, and Watkins and Montour Falls, at the southerly end of Seneca lake, within the canal zone. These latter cities and villages are close to the southern bound-

aries of the State, and not far distant from the Pennsylvania coal fields. Ithaca and Watkins are already important shipping points for coal, and with such improvement as is suggested, they might easily become the most important harbors for coal shipment known to the country. The already extensive salt interests at both Ithaca and Watkins, the cement interests at Ithaca and the building stone interests at Union Springs and at other points would undoubtedly be enlarged and extended.

While the means have not been at hand for an accurate estimate of the cost of such an improvement, from such data as has been obtainable, it is estimated that the deepening of the Seneca river, the Cayuga lake outlet, from the point where the Barge Canal enters the Clyde river to deep water in Cayuga lake, could be accomplished for about \$1,750,000.

It is also estimated that the deepening of Seneca river, from Mudlock to deep water in Seneca lake could be accomplished for about \$4,000,000.

These estimates include the cost of the necessary controlling works for the regulation of the levels of Cayuga and Seneca lake.

If this project upon careful study shall appeal to you as one upon which the State might properly enter, a means is provided by section 10 of article VII of the Constitution, as follows:

“The canals may be improved in such manner as the legislature shall provide by law. A debt may be authorized for that purpose in the mode prescribed by section four of this article, or the cost of such improvement may be defrayed by the appropriation of funds from the State treasury, or by equitable annual tax.”

Section 4, referred to in the provision quoted, authorizes the issuing of fifty-year bonds. Of course, any such provision under the terms of section 4 of the Constitution would need to be submitted to the people for vote, but if an enabling act should be passed by the present Legislature for the confirmation and vote of the people at the coming November election, there can be little question as to a favorable answer from the people; and in the event of a favorable answer the actual operations may be begun in time to bring about the completion of the work at a date as early as it can now be expected the major canal will be finished.

If this undertaking is one which shall appeal to your honorable body and more detailed information and more specific data is desired, I believe the State Engineer and Surveyor and the Superintendent of Public Works together will be able to provide such data as will be sufficient to base final action upon, and I bespeak the State Engineer and Surveyor's co-operation with the Superintendent of Public Works in any effort necessary to comply with such requests for information as your body shall decide to make.

### WATER STORAGE ON SENECA AND ONEIDA RIVER BASINS.

A subject closely allied to that of canalizing the outlets of Cayuga and Seneca lakes and the establishment of controlling works, though not primarily a part of such project, is the establishment of controlling works at such points as may be necessary to an adequate storage of the waters in the Seneca and Oneida river basins, thus holding back the water during flood times, and discharging it at a more uniform rate during the dry season.

The State Water Supply Commission has made something of a study of these areas, and conferences have been held between the members of that commission and the Superintendent of Public Works and others having to do with canal affairs. It is the consensus of opinion on the part of officials having to do with the canals that any undertaking looking to the storage and control of waters which might be deemed a part of the canal system or contributory to its success and welfare should be directly and fully under the control of the canal authorities, and I believe the members of the State Water Supply Commission are agreed that this should be so.

In the construction of the Barge Canal the cross section of the Clyde and Seneca rivers will in many places be greatly increased both in width and depth. Although dams and controlling works are placed at certain points the probabilities are that the completion of the Barge Canal will facilitate the discharge of flood waters in Seneca river. This will aggravate flood conditions at Baldwinsville, Onondaga lake and other points farther down the river. Similar construction in Oneida river may slightly increase flood



discharge in that river. These rivers join at Three River Point to form Oswego river. This latter river is canalized by a system of locks and dams forming slack water pools. While the plans for this work are not yet definitely known, it is probable that any design adopted will tend to hold up flood waters. Hence increased flood heights may be expected at cities where the river channel is contracted.

To regulate under these changed conditions, there should be established controlling works at the outlets of the so-called finger lakes and Oneida lake to hold back flood waters and discharge it at a more uniform rate during the dry season. Surveys will be necessary in order to arrive at the cost of these controlling works and to fix the permissible high and low stages in these lakes. Enough is known, however, to say that the entire runoff from the catchment areas of Canandaigua, Keuka, Seneca and Cayuga lakes can be stored in these lakes and discharged at a uniform flow throughout the year and this without causing any material damage to existing interests. On the other hand with such regulation, floods on these lakes will be unknown.

The above catchment areas comprise about 46 per cent of the watershed of Seneca river above Three River Point. Hence the floods of about half of the Seneca river watershed would be under control. Moreover, it is very probable that such a low water stage in these lakes could be established as to make it possible to hold back part of the runoff from these lakes while the unregulated floods from the balance of the watershed was being discharged.

It will probably not be practicable to control all the discharge from Oneida lake but enough can be controlled to reduce the floods from 50 per cent. to 100 per cent.

Among other benefits which would result from this would be a reduction of floods, an increased flow during low water period, an improvement of navigation interests and a very greatly increased water power. Incidentally, also, the value of all low lying property which would be reclaimed would be enhanced.

If the State shall act wisely and shall retain control of the water power, created not only upon these rivers but at other points, the sale of such water power at a price, fair to the purchaser and

equitable to the State, would make this a source of the greatest revenue to the State.

Another possible benefit would be that riparian owners along these rivers who deem themselves actually or prospectively damaged as a result of the construction of the Barge Canal, would be thus re-assured, and if the court should determine in favor of the claimants, the actual damages which could be proved would thus be minimized.

On Oneida lake it is estimated that the maximum discharge can be reduced from 50 per cent. to 100 per cent., while the minimum summer discharge can be increased from 200 per cent. to 300 per cent. It is estimated that on Seneca, Cayuga, Keuka and Canandaigua lakes, the entire amount can be stored or discharged at a mean flow. The benefits resulting from an agricultural standpoint in this whole district would be so great as to be almost beyond computation.

While surveys would be necessary to make a reliable estimate of the cost of installing these several controlling works, it may be roughly estimated as follows:

Oneida lake . . . . .	\$50,000
Cayuga lake . . . . .	200,000
Seneca lake . . . . .	25,000
Keuka lake . . . . .	50,000
Canandaigua lake . . . . .	50,000
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Total . . . . .	\$375,000
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In the event of the improvement of the Cayuga and Seneca lake outlets, as recommended above, upon a proper basis, this estimate would be reduced by about \$100,000.

While, of course, under the authority of the Barge Canal Law, the State officials have full power to erect such structures as shall be essential in connection with the maintenance and operation of the canal, including the storage of water, it is not felt that this authority is sufficient to authorize all the constructions needed to a proper storage, control and regulation of the waters of Oneida lake, Seneca river and their tributaries, in the manner suggested above.

The facilities, however, for increasing the resources of the State, for preventing damage to public property and to private property for which the State may ultimately be held responsible, for reclaiming lands and for fostering industries, are so handy at the door, that it will seem a pity if the State does not take hold and utilize them.

I therefore recommend that some action, definite as to detail and specific as to the method, be taken, looking to a proper utilization of these natural advantages.

### RECOMMENDATIONS.

I recommend an appropriation for the fiscal year beginning October 1st next for ordinary repairs and operating expenses of the canals of \$800,000, and for emergency purposes the sum of \$125,000. This is the same amount as was asked for for the current year for ordinary repairs and operating expenses, the sum of \$775,000 being finally appropriated for this purpose. The increase over this of \$25,000 is made necessary by reason of the additional watchmen and repair force which will be necessary to provide on such portions of the present canal as are being interfered with on account of Barge Canal construction work. While the amount asked is a slight increase over the amount allowed for the current year, it is much less than has been annually appropriated in former years.

I also recommend that, in the event that the policy heretofore pursued for many years of placing the work of repairing Indian roads under the charge of this Department shall be followed, an appropriation of \$15,000 be provided for this purpose.

Also, I recommend that the sum of \$15,000 be allowed for the support of the bureau in this Department for the defense of claims brought on account of the canal.

Respectfully submitted,

FREDERICK C. STEVENS,

*Superintendent of Public Works.*

Statement of all Expenditures Made by the Superintendent of Public Works, for the Operation, Maintenance and Repairs of the Canals, the Extraordinary Repairs of Mechanical and Other Structures, and other Work and Expenses Provided for by Special Acts of the Legislature; also on Account of the "Barge Canal."

## ORDINARY REPAIR FUND.

For locktending and ordinary repairs of the canals (see statement No. 1) .....	\$794,653 48	
For administrative expenses (see statement No. 2) .....	48,186 80	
For expenses of collectors and compilers of statistics (see statement No. 3) .....	15,664 76	
For office expenses of the Superintendent of Public Works and three Assistant Superintendents of Public Works (see statement No. 4) .....	32,471 00	
	<hr/>	\$890,976 04

## EXTRAORDINARY REPAIR FUND.

For repairs and improvements of existing mechanical and other structures and works on and connected with the canals of the State:		
Chapter 162, Laws 1906 (see statement No. 5) .....	\$140,710 85	
Chapter 171, Laws 1907 (see statement No. 6) .....	42,089 02	
	<hr/>	182,799 87

## SPECIAL APPROPRIATIONS.

Expended for various purposes (see statement No. 7) .....	278,150 19
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## "BARGE CANAL ACT."

Expended as shown on statement No. 8 .....	4,727,578 82
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	<u>\$6,079,504 92</u>

*A Statement of the appropriations for the operation and repairs and extraordinary repairs of the canals, salaries and traveling expenses of the Superintendent, deputy, three assistant superintendents, clerk hire and office expenses, salaries of section superintendents and collectors and compilers of statistics and inspectors.*

YEAR.	Locktending and ordinary repairs.	Repair and improvement of existing mechanical and other structures.	Salaries and office expenses.	Salaries of section superintendents.	Salaries of collectors and inspectors and incidental expenses.	Reconstruction of the embankments, slope wall and repair of other damage by floods.	Total.
1900.....	\$870,000 00	\$350,000 00	\$54,064 00	\$28,400 00	\$25,000 00	.....	\$1,327,464 00
1901.....	820,000 00	325,000 00	54,044 00	28,400 00	22,400 00	.....	1,350,744 00
1902.....	820,000 00	275,000 00	56,844 00	28,400 00	17,800 00	.....	1,173,144 00
1903.....	820,000 00	275,000 00	56,844 00	28,400 00	16,700 00	.....	1,200,044 00
1904.....	820,000 00	260,000 00	53,844 00	27,500 00	18,900 00	\$75,000 00	1,271,944 00
1905.....	775,000 00	150,000 00	53,844 00	27,500 00	18,763 00	.....	1,101,944 00
1906.....	775,000 00	125,000 00	53,844 00	26,000 00	17,263 00	.....	1,011,907 00
1907.....	775,000 00	125,000 00	57,019 00	26,000 00	17,263 00	.....	996,807 00
1908.....	775,000 00	125,000 00	57,019 00	26,000 00	17,263 00	.....	1,000,282 00
Total.....	\$7,275,000 00	\$2,075,000 00	\$498,791 00	\$249,000 00	\$177,989 00	\$75,000 00	\$10,348,780 00

STATEMENT No. 1.  
STATEMENT of expenditures, ordinary repairs, for fiscal year ended September 30, 1908.

CANAIS.	Sections.	By Superin- tendent of Public Works.	By Assistant Superintend- ents of Public Works.	By Superin- tendents of Canal Repairs.	Total each section.	Total each canal.
Erie.....	1.....	.....	\$26,179 57	\$2,401 47	\$28,581 04	
Erie.....	2.....	.....	19,385 64	1,813 76	21,199 40	
Erie.....	3.....	.....	27,202 81	1,689 99	28,892 80	
Erie.....	4.....	.....	18,457 02	1,393 65	19,850 67	
Erie.....	5.....	.....	20,115 12	18,279 14	38,394 26	
Erie.....	6.....	.....	36,174 34	21,678 27	57,852 61	
Erie.....	7.....	.....	10,622 96	12,608 26	23,231 22	
Erie.....	8.....	.....	7,587 04	31,034 81	38,621 85	
Erie.....	9.....	.....	24,788 69	27,444 33	52,233 02	
Erie.....	10.....	.....	24,673 55	25,264 93	49,938 48	
Erie.....	11.....	.....	19,915 75	28,492 00	48,407 75	\$407,203 10
Champlain.....	1.....	.....	\$11,719 92	\$20,247 43	\$31,967 35	
Champlain.....	2.....	.....	11,719 19	26,572 04	38,291 23	
Champlain.....	3.....	.....	4,839 26	15,074 90	19,914 16	90,172 74
Oswego.....	.....	.....	\$8,333 76	\$13,973 41	\$22,307 17	22,307 17
Cayuga and Seneca.....	.....	.....	\$15,832 71	\$11,902 09	\$27,734 80	27,734 80
Black River.....	.....	.....	\$15,491 33	\$26,136 00	\$41,627 33	41,627 33
Division expenses:						
Eastern.....	.....	.....	\$39,649 17	.....	\$39,649 17	
Middle.....	.....	.....	27,466 23	.....	27,466 23	
Western.....	.....	.....	26,666 37	.....	26,666 37	93,781 77

STATEMENT of expenditures for ordinary repairs and operating expenses on New York State Canals, by  
divisions, for fiscal year ended September 30, 1908.

	CANALS.	By Supt. of Public Works.	By Asst. Supts. of Public Works	By Supts. of Canal Repairs.	Total.
Eastern Division.....	Erie.....	.....	\$91,225 04	\$7,298 87	
Eastern Division.....	Champlain.....	.....	28,278 37	61,894 37	
Eastern Division.....	Division expenses.....	.....	39,649 17	.....	
			\$159,152 58	\$69,193 24	\$228,345 82
Middle Division.....	Erie.....	.....	\$66,912 42	\$52,565 67	
Middle Division.....	Oswego.....	.....	8,333 76	13,973 41	
Middle Division.....	Cayuga and Seneca.....	.....	15,832 71	11,902 09	
Middle Division.....	Black River.....	.....	15,491 33	26,136 00	
Middle Division.....	Division expenses.....	.....	27,466 23	.....	
			\$134,036 45	\$104,577 17	238,613 62
Western Division.....	Erie.....	.....	\$76,965 03	\$112,236 07	
Western Division.....	Division expenses.....	.....	26,666 37	.....	
			\$103,631 40	\$112,236 07	215,867 47
General expenses.....	Erie, general.....	\$12,685 60			
General expenses.....	Section No. 1, Erie.....	42,942 20			
General expenses.....	Section No. 2, Erie.....	22,798 64			
General expenses.....	Section No. 3, Erie.....	14,953 34			
General expenses.....	Section No. 4, Erie.....	18,446 79			
					111,826 57
					\$791,653 48

<b>General expenses:</b>					
Erie, general					
Erie	1.	\$12,685 60	.....	\$12,685 60	
Erie	2.	42,942 20	.....	42,942 20	
Erie	3.	22,798 64	.....	22,798 64	
Erie	4.	14,953 34	.....	14,953 34	
Erie		18,446 79	.....	18,446 79	
					111,826 57
					\$794,653 48



## STATEMENT NO. 2.

## Statement of Administrative Expenses for Fiscal Year Ended

September 30, 1908.

F. C. Stevens, Superintendent of Public Works, salary and expenses .....	\$6,311 83
Winslow M. Mead, Deputy Superintendent of Public Works, salary and expenses.....	5,550 62
David H. Lewis, Assistant Superintendent of Public Works, Eastern Division, salary and expenses .....	3,445 97
Thomas Wheeler, Assistant Superintendent of Public Works, Middle Division, salary and expenses .....	127 76
Charles C. Barrett, Assistant Superintendent of Public Works, Middle Division, salary and expenses .....	3,466 61
Charles C. Barrett, Assistant Superintendent of Public Works, Western Division, salary and expenses ..	170 82
Oscar H. Peacock, Assistant Superintendent of Public Works, Western Division, salary and expenses .....	3,178 80
George H. Whitney, Superintendent of Repairs, section 1, Erie .....	1,412 50
Jacob M. Grass, Superintendent of Repairs, section 1, Erie .....	62 50
James Scanlon, Superintendent of Repairs, section 2, Erie .....	1,500 00
Oliver Hurst, Superintendent of Repairs, section 3, Erie .....	1,500 00
Charles Wallace, Superintendent of Repairs, section 4, Erie.....	1,500 00
Daniel F. Breitenstein, Superintendent of Repairs, section 5, Erie .....	1,500 00
E. J. Clark, Superintendent of Repairs, section 6, Erie .....	1,500 00
A. B. Hallett, Superintendent of Repairs, section 7, Erie .....	1,500 00

R. A. Vanderboget, Superintendent of Repairs, section 8, Erie .....	\$1,500 00
George A. Goss, Superintendent of Repairs, sec- tion 9, Erie .....	1,500 00
Frank B. Seeley, Superintendent of Repairs, sec- tion 10, Erie .....	266 12
Charles L. Papworth, Superintendent of Repairs, section 10, Erie .....	1,193 27
William J. Hingston, Superintendent of Re- pairs, section 11, Erie .....	2,000 00
John Richmond, Superintendent of Repairs, sec- tion 1, Champlain .....	1,500 00
Patrick O'Grady, Superintendent of Repairs, section 2, Champlain .....	1,500 00
George Neddo, Superintendent of Repairs, sec- tion 3, Champlain .....	1,500 00
D. S. Burleigh, Superintendent of Repairs, Oswego canal .....	1,500 00
O. E. Emens, Superintendent of Repairs, Cayuga and Seneca .....	1,500 00
J. A. Fiske, Superintendent of Repairs, Black River .....	1,500 00
	<hr/>
	\$48,186 80
	<hr/> <hr/>

## STATEMENT No. 3.

Statement of Expenses of the Statistician and Compilers of Sta-  
tistics of the Tonnage of the Canals, for the Year Ended Sep-  
tember 30, 1908.

Statistician, salary .....	\$2,000 00
Collectors, salaries .....	7,523 20
Clerks, salaries .....	5,341 62
Incidental expenses, stationery, rent of office, coal, etc. ....	799 94
	<hr/>
	\$15,664 76
	<hr/> <hr/>

## STATEMENT NO. 4.

Statement, Clerk Hire and Office Expenses of Superintendent of  
Public Works and Assistant Superintendents of Public Works,  
for the year ended September 30, 1908.

Albany office .....	\$20,278 87
Eastern division office .....	3,160 55
Middle division office .....	4,553 55
Western division office .....	4,478 03
	<hr/>
	\$32,471 00
	<hr/> <hr/>

## ALBANY OFFICE.

October 1, 1907, to September 30, 1908.

Salaries and clerk hire.....	\$13,425 00
Special agent .....	1,200 00
Postage stamps and box rent .....	367 82
Telegraphing . . . . .	253 95
Telephone service .....	515 86
Stationery and printing .....	1,198 89
Newspapers and directories .....	13 30
Expressage .....	182 28
Drinking water for office .....	27 55
Table . . . . .	24 00
Glazed partitions .....	2,475 00
Legislative index .....	50 00
Qualifying as notary public .....	5 00
Traveling expenses .....	167 43
Framing maps .....	10 00
Lettering doors .....	6 00
Chairs . . . . .	38 41
Electric portable lamps .....	16 00
Typewriter repairs .....	5 00
Newspaper clippings .....	165 00
Dater . . . . .	9 00
Repairing seal .....	3 20
Cabinet . . . . .	28 50

Vertical file .....	\$11 00
Filing cases .....	80 68
	<hr/>
	\$20,278 87
	<hr/>

### ERIE CANAL — GENERAL.

October 1, 1907, to October 1, 1908.

Special agent, salary and expense.....	\$1,021 96
Inspector, salary and expense.....	87 69
Paymaster, salary and expense.....	2,783 72
Carpenter, State inspection boat, salary and expense .....	411 06
Pilot, State inspection boat, salary and expense.	481 82
Deck hand, State inspection boat, salary and expense ...	168 16
Cook, State inspection boat, salary and expense.	747 16
Gasoline and oil, State inspection boat.....	300 83
Repairs, materials and supplies, State inspection boat .....	1,124 61
Publishing notices, closing of canals.....	41 00
Publishing notices, opening of canals.....	78 00
Recording appropriations of land.....	4 50
Cement sacks .....	261 06
Installing signaling equipment for locks.....	2,221 53
Repairing bridge at Bridge street, Amsterdam..	2,436 90
Expenses incurred in connection with charges preferred against Frank B. Seeley, Superintendent of Canal Repairs, for incompetency and misconduct in office.....	385 01
Medical services and hospital attendance incurred in connection with injuries received by John Irving, while employed in State shop, Syracuse, as laborer.....	120 28
Restoration of discount disallowed by Cayuga Lake Cement Co.....	10 31
	<hr/>
	\$12,685 60
	<hr/>

## STATEMENT No. 5.

Extraordinary Repairs and Improvements of Existing Mechanical  
and Other Structures and Works on and Connected with the  
canals of the State.

(Chapter 162, Laws 1906.)

Unexpended balance January 1, 1908..... \$140,710 85

## EXPENDITURES FOR THE YEAR 1908.

*Eastern Division.**Trimming lock walls:*

## Section 1, Erie:

Lock No. 8..... \$191 62

Lock No. 14..... 623 51

## Section 3, Erie:

Lock No. 32..... 10 57

## Section 2, Champlain:

Lock No. 15..... 354 72

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1,180 42

*Rip-rapping:*

## Section 3, Erie:

Between locks Nos. 28 and 29... \$989 00

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989 00

*Repair of lock bottoms:*

## Section 1, Erie:

Lock No. 16..... \$798 22

## Section 3, Erie:

Lock No. 28..... 3,078 43

## Section 4, Erie:

Lock No. 42..... 2,488 10

## Section 2, Champlain:

Lock No. 6..... 568 78

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6,933 53

*Repairs of lock gates and ribbons:*

## Section 1, Erie:

Lock No. 2, Champlain..... \$198 56

## Section 2, Erie:

Lock No. 22 .....	\$151 85	
Section 3, Erie:		
Lock No. 33.....	115 00	
Section 4, Erie:		
Lock No. 35.....	117 00	
Lock No. 38.....	121 00	
Lock No. 40.....	199 83	
Lock No. 42.....	109 00	
Lock No. 43.....	199 85	
Lock No. 44.....	116 10	
Lock No. 45.....	110 85	
Section 1, Champlain:		
Waterford side-cut .....	206 67	
Section 2, Champlain:		
Lock No. 15.....	18 56	
Lock No. 10, Glens Falls feeder..	95 00	
Lock No. 12, Glens Falls feeder..	106 27	
Section 3, Champlain:		
Lock No. 16 .....	285 81	
		<hr/>
		\$2,151 35

*Repairing vertical and slope walls:*

Section 1, Erie:		
Between lock No. 3 and Lower Mohawk aqueduct .....	\$865 58	
Section 2, Erie:		
Between bridge No. 71 and lock No. 26 .. .....	298 25	
Section 3, Erie:		
East of lock No. 30.....	503 43	
Section 1, Champlain:		
Near culvert No. 7.....	115 43	
Section 2, Champlain:		
Between bridges Nos. 89 and 90.	61 19	
West of bridge No. 94.....	116 06	
		<hr/>
		1,959 94

*Repairing bridges:*

## Section 2, Erie:

Bridge Rexford Flats feeder....	\$172 85
Bridge No. 67.....	184 07
Bridge No. 56.....	750 92

## Section 3, Erie:

Bridge No. 113.....	125 25
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## Section 4, Erie:

Bridge No. 137.....	173 29
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## Section 2, Champlain:

Bridge, foot Lock No. 13.....	205 25
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## Section 2, Champlain:

Bridge No. 95.....	520 13
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 \$2,131 76
*Docking:*

## Section 1, Erie:

Upper end locks Nos. 10 and 11..	\$197 40
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## Section 2, Erie:

West of bridge No. 62.....	2,795 56
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## Section 3, Erie:

Big Nose . . . . .	585 14
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## Section 4, Erie:

Head of lock No. 39.....	81 50
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 3,659 60
*Rebuilding bridge abutments:*

## Section 1, Champlain:

Bridges Nos. 38 and 39.....	\$1,385 36
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## Section 3, Champlain:

Bridge No. 113 . . . . .	229 30
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 1,614 66
*Repairing Glens Falls feeder:*

Section 2, Champlain . . . . .	\$7,185 50
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 7,185 50
*Repairing bulkheads and sluices:*

## Section 3, Erie:

New bulkhead near lock No. 29....	\$61 00
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## Section 2, Champlain:

Sluice lock No. 3, Glens Falls feeder . . . . .	\$280 59
Bulkhead and sluice at lock No. 4, Glens Falls feeder . . . . .	107 87
New sluice at lock No. 12, Glens Falls feeder . . . . .	541 49

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 \$990 95
*Repairing aqueducts:*

## Section 1, Erie:

Lower Mohawk aqueduct . . . . .	\$129 70
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## Section 3, Erie:

Aqueducts Nos. 6, 7, and 8 . . . . .	1,174 24
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## Section 4, Erie:

Ilion aqueduct . . . . .	77 46
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 1,381 40
*Repointing and grouting lock walls:*

## Section 1, Erie:

Lock No. 2 . . . . .	\$153 58
Lock No. 18 . . . . .	121 00
Lock No. 1, Champlain . . . . .	47 69

## Section 1, Champlain:

Locks Nos. 5, 6, 7, and 8 . . . . .	195 14
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## Section 2, Champlain:

Lock No. 14 . . . . .	149 06
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 666 47
*Cleaning under aqueducts and culverts:*

## Section No. 3, Erie:

Culvert No. 38 . . . . .	\$173 00
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## Section No. 3, Erie:

Culvert No. 43 . . . . .	431 00
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 604 00



*Grading, graveling and protecting  
towing-path:*

Section No. 3:

Half a mile east and west of cul- vert No. 41 .....	\$393 50	
From lock Nos. 28 to 29, and 2½ miles west of Bridge 86.....	537 75	
	<hr/>	\$931 25
		<hr/>
		\$32,379 83
		<hr/> <hr/>

*Middle Division.*

*Repairs to locks on section 7, Erie:*

Lock No. 51 .....	\$790 39	
Lock No. 52 .....	405 32	
	<hr/>	\$1,195 71

Oswego canal:

Lock No. 7.....	\$369 35	
Lock Nos. 12 and 14.....	883 11	
	<hr/>	1,252 46

Cayuga and Seneca canal:

Lock No. 1.....	\$257 08	
Lock No. 3 .....	687 61	
Lock No. 4 .....	370 03	
	<hr/>	1,314 72

Black River canal:

Lock No. 3.....	\$3,383 27	
Lock No. 31.....	46 88	
Lock No. 32.....	376 86	
Lock No. 38.....	310 67	
Locks Nos. 41, 42 and 43.....	199 82	
Lock No. 58.....	6,521 09	
	<hr/>	10,838 59

Repairs to Lewis and Stone Farm  
bridges, over DeRuyter feeder,  
section 6, Erie .....

\$122 80

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122 80

Syracuse aqueduct — Erie canal — Onondaga creek culvert, sec- tion 6, Erie.....	\$31,994 71	
	<hr/>	\$31,994 71
Repairs to Jordan aqueduct, sec- tion 7, Erie .....	\$210 75	
	<hr/>	210 75
Repairs to bridges, city of Syra- cuse, section 6, Erie:		
West Genesee street.....	\$638 21	
Geddes street . . . . .	186 46	
South Salina street . . . . .	562 49	
State street . . . . .	814 01	
Clinton street . . . . .	469 83	
Catherine street . . . . .	333 51	
Willow street . . . . .	4 25	
	<hr/>	3,008 76
Repairs to bridges, city of Utica:		
Genesee street . . . . .	\$3,213 14	
Broad street . . . . .	18 61	
Hotel street . . . . .	38 34	
Washington street . . . . .	86 40	
Schuyler street . . . . .	62 43	
John street . . . . .	316 97	
Whitesboro street . . . . .	49 12	
	<hr/>	3,785 01
Repairs to Nail creek culvert, sec- tion 5, Erie .....	\$1,290 28	
	<hr/>	1,290 28
Installing lock gates, Cayuga and Seneca canal, locks Nos. 1, 3, 4.	\$262 39	
	<hr/>	262 39
Building dump scows for dredge fleet . . . . .	\$2,065 69	
	<hr/>	2,065 69
Repairing bridge abutment, east of Mud lock, section 6, Erie.....	\$582 49	
	<hr/>	582 49

Oak caps at Jordan aqueduct, section 7, Erie .....	\$120 51	
		\$120 51
Construction of pump boat, for division .....	\$3,514 91	
		3,514 91
Construction of storehouses, for division .....	\$1,340 12	
		1,340 12
Rebuilding sluices, Black River canal:		
Lock No. 2.....	\$266 20	
Lock No. 14.....	243 89	
Lock No. 31.....	228 62	
Lock No. 48.....	373 90	
		1,112 61
Relaying wall at Rome, section 5, Erie .....	\$547 26	
		547 26
Concrete wall, Syracuse, section 6, Erie, between locks Nos. 48 and 49 .....	\$920 01	
		920 01
Pile docking, Geneva, Cayuga and Seneca canal .....	\$2,577 72	
		2,577 72
Repairs to Park street bridge, Syracuse, section 6, Erie.....	\$1,552 13	
		1,552 13
Repairs to dry-dock, Waterloo, Cayuga and Seneca canal.....	\$404 97	
		404 97
Repairing leaks in berme embankment, Canastota, section 5, Erie .....	\$86 57	
		86 57
Repairs of bridge abutment, over Wood creek, Rome, section 5, Erie .....	\$158 87	
		158 87

Repairing wall in front of the Utica Fire Alarm Co.'s plant, Utica, section 5, Erie.....	\$145 55	
	<hr/>	\$145 55
Repairs to tow-path wall at Boli- var, section 6, Erie .....	\$216 63	
	<hr/>	216 63
Repairing break in Oswego canal, between locks Nos. 13 and 14..	\$979 82	
	<hr/>	979 82
		<hr/>
		\$71,602 04

*Western Division.*

Constructing wooden draw-bridge across Scajaquada creek, sec- tion 11, Erie.....	\$838 25	
	<hr/>	838 25
Building and repairing boats, sec- tion 9, Erie .....	\$1,884 65	
Building and repairing boats, sec- tion 11, Erie .....	7,420 92	
	<hr/>	9,305 57
Piling, section 11; Erie: Near Germania Park bridge.....	\$312 70	
Tonawanda dam . . . . .	316 10	
	<hr/>	628 80
Repairing vertical walls: Section 8, Erie, east end Palmyra aqueduct . . . . .	\$472 92	
Section 8, Erie, west side culvert 7, east of Clyde.....	212 75	
Section 9, Erie, rear of Mrs. Wheeler's property, Brighton.	112 62	
Section 9, Erie, at various places between Monroe ave. bridge and Lyell ave. bridge, Rochester ...	3,562 02	
Section 10, Erie, in the vicinity of Medina . . . . .	906 41	
	<hr/>	5,266 72

## Repairing locks, section 8, Erie:

Lock No. 57 . . . . .	\$116 04
Lock No. 58 . . . . .	79 17
Lock No. 60 . . . . .	1,518 50
Lock No. 61 . . . . .	185 50

## Repairing locks, section 9, Erie:

Lock No. 65 . . . . .	284 00
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\$2,183 21

Repairing dry dock at Newark,  
section 8, Erie.....

\$539 98

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539 98

Repairing bridges, section 8,  
Erie, Nos. 36 and 41.....

\$643 25

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643 25

Timber guard rail, section 10,  
Erie, from the head of lock No.  
71, for about 1,000 feet west  
of it . . . . .

\$1,960 34

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1,960 34

Repairs to culverts, section 8,  
Erie:

No. 10, east of lock No. 53.....

\$227 11

No. 13, at lock Berlin.....

72 08

Section 9, Erie:

No. 47, Erie, near Spencerport...

1,350 42

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1,649 61

Repairing bridge abutments, sec-  
tion 10, Erie:

Bridge 121 . . . . .

\$155 60

Bridge 122 . . . . .

26 28

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181 88

Repairing waste-weir and bulk-  
head at Medina, section 10,  
Erie . . . . .

\$141 21

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141 21

Repairs to break at bridge No.		
48, on section 9, Erie.....	\$13,390 16	
	<hr/>	\$13,390 16
		<hr/>
		\$36,728 98
		<hr/>
Total . . . . .		\$140,710 85
		<hr/>
		<hr/>

## STATEMENT No. 6.

Extraordinary Repairs and Improvements of Existing Mechanical  
and Other Structures and Works on and connected with the  
Canals of the State.

(Chapter 171, Laws 1907.)

Appropriation . . . . .	\$125,000 00
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## EXPENDITURES FOR THE YEAR 1908.

*Eastern Division.*

Docking, section 1, Erie:		
North of bridge No. 3, to bridge		
No. 5 . . . . .	\$74 00	
Section 2, Erie, east of bridge No.		
36 . . . . .	145 00	
Section 1, Champlain, north of		
lock No. 10 . . . . .	94 00	
Section 1, Champlain, between		
bridges Nos. 35 and 36 . . . . .	146 51	
Section 1, Champlain, south of		
bridge No. 38 . . . . .	79 80	
Section 1, Champlain, between		
bridges Nos. 48 and 49 . . . . .	172 00	
Section 3, Champlain, on five mile		
level . . . . .	185 37	
Section 3, Champlain, on twelve		
mile level . . . . .	30 00	
	<hr/>	\$926 68

## Strengthening berme banks:

Section 1, Erie, from locks Nos. 3 to 18 .....	\$520 75	
Section 2, Erie, east and west of bridge No. 75 .....	279 50	
Section 4, Erie, east of Fink's Basin .....	153 00	
	<hr/>	\$953 25

## Repairing culverts and aqueducts:

Section 1, Erie, culvert No. 7...	\$151 55	
Section 1, Erie, lower Mohawk Aqueduct .....	68 40	
Section 2, Erie, upper Mohawk Aqueduct .....	94 00	
	<hr/>	313 95

Grading, graveling, and protecting  
towing path:

Section 1, Erie, between lock No. 2 and Watervliet side-cut.....	\$60 00	
Section 1, Erie, between locks Nos. 1 and 2.....	239 75	
Section 2, Erie, between bridge No. 54 and swing bridge at American Locomotive Works ..	738 50	
Section 3, Erie, from lock No. 28 to 29, and for 2½ miles west of bridge 86 .....	3,784 61	
Between locks Nos. 32 and 33....	379 00	
Section 4, Erie, between bridge Nos. 162 and 164 .....	1,450 00	
Section 3, Champlain, from lock Nos. 20 to 21.....	96 50	
	<hr/>	6,748 36

## Repairs to bridge abutments:

Section 2, Erie, bridge No. 75....	\$74 50	
	<hr/>	74 50

## Repairs to locks:

Section 1, Erie, from lock Nos. 3		
to 18 .....	\$78 25	
	<hr/>	\$78 25
		<hr/>
		\$9,094 99
		<hr/>
		<hr/>

*Middle Division.*

Reconstruction of breakwater and		
pier at Cayuga, Cayuga and		
Seneca canal .....	\$7,029 74	
	<hr/>	\$7,029 74

## Painting bridges:

Section 5, Erie .....	\$1,469 03	
Section 6, Erie .....	2,004 91	
Section 7, Erie .....	151 25	
Oswego canal .....	245 00	
Cayuga and Seneca canal .....	870 40	
	<hr/>	4,740 59

## Strengthening berme banks:

Section 5, Erie, between R. R.		
bridge at State bridge and Fort		
Bull .....	\$847 20	
Section 6, Erie, between Kirkville		
and Bolivar bridge and Jordan		
level, east of Amboy bridge and		
Liverpool level, between locks		
Nos. 3 and 5 .....	2,045 45	
	<hr/>	2,892 65

## Pointing masonry structures:

Section 5, Erie .....	\$354 76	
Section 6, Erie .....	257 80	
Section 7, Erie .....	497 86	
	<hr/>	1,110 42

## Repairs to Stone creek culvert:

Section 5, Erie .....	\$254 65	
	<hr/>	254 65



## Repairs to Centerport Aqueduct:

Section 7, Erie . . . . .	\$656 68	
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\$656 68

## Graveling towing path:

Section 5, Erie, between Oriskany and Durhamville . . . . .	\$2,887 06	
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Section 6, Erie between Camilus feeder and Geddes St. bridge, and between Hudson's Landing and Kirkville . . . . .	18 00	
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2,905 06

## Repairs to Oriskany dam:

Section 5, Erie . . . . .	\$5 60	
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5 60

## Repairs to Oriskany aqueduct:

Section 5, Erie . . . . .	\$39 00	
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39 00

## Rebuilding slope wall on level

No. 5, between Phoenix and Mud Lock, and Baldwinsville, Oswego canal . . . . .	\$2,019 91	
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2,019 91

## Repairs to Lee and Slocum cul-

verts, Forestport feeder, Black river canal . . . . .	\$68 71	
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68 71

## Repairs to bank at Caughdenoy

lock, Oswego canal . . . . .	\$483 65	
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483 65

## Repairs to dam at North lake,

Black River canal . . . . .	\$1,965 67	
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1,965 67

Repairs to culverts, Section 5,  
Erie:

Culvert No. 7 . . . . .	\$203 03	
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Culvert No. 8 . . . . .	42 18	
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Culvert No. 15 . . . . .	86 68	
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Culvert No. 19 . . . . .	100 37	
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432 26

Building barn and storehouse, Middle Division .....	\$314 56	
	<hr/>	\$314 56
Repairs to locks, section 6, Erie:		
Lock No. 50.....	\$131 64	
Section 7, Erie, locks Nos. 51 and 52 .....	52 37	
Black River canal, lock No. 62...	34 50	
	<hr/>	218 51
Repairs to vertical and slope walls, section 7, Erie, west of bridge No. 112 .....	\$15 45	
	<hr/>	15 45
Repairs to bank at Brandybrook culvert, section 5, Erie.....	4 50	
	<hr/>	4 50
Repairs to bridges, Oswego canal, Bridge street, and Lock street bridge at Phoenix.....	\$217 30	
	<hr/>	217 30
Repairs to division wall near Seneca Falls, Cayuga and and Seneca canal.....	\$203 95	
	<hr/>	203 95
Building stone and gravel scows, middle division .....	\$202 29	
	<hr/>	202 29
		<hr/>
		\$25,781 15
		<hr/> <hr/>

*Western Division.*

Repairs to break at bridge 48, sec- tion 9, Erie .....	\$1,633 25	
	<hr/>	\$1,633 25

Building new scows, section 9, Erie . . . . .		\$898 09	
			\$898 09
Cindering towing-path, section 10, Erie, between Lockport and Sulphur Springs guard-lock, and various other places. . . . .		\$151 20	
Cindering towing-path, section 11, Erie, at various points through- out the entire section. . . . .		1,972 75	
			2,123 95
Constructing guard rails, section 10, Erie, to approaches on all bridges from No. 137 to 157..		\$610 68	
			610 68
Sheet piling, section 9, Erie, be- tween culvert No. 28 and bridge No. 48 . . . . .		\$310 12	
			310 12
Painting bridges:			
Section 8, Erie . . . . .		\$92 00	
Section 9, Erie . . . . .		337 90	
Section 10, Erie . . . . .		494 65	
Section 11, Erie . . . . .		501 69	
			1,426 24
Repairing vertical walls, section 9, Erie, on berme side of en- trance to Ohio basin, from B. R. & P. R. R. swing bridge, to Erie canal . . . . .		\$210 55	
			210 55
			\$7,212 88
			\$42,089 02

# SUMMARY OF AVAILABLE FUNDS AND EXPENDITURES FOR THE YEAR 1908, FROM THE EXTRAORDINARY REPAIR FUNDS.

(Chapter 162, Laws of 1906.)

Unexpended balance January 1, 1908..... \$140,710 85

(Chapter 171, Laws 1907.)

Appropriation . . . . . 125,000 00

(Chapter 290, Laws 1908.)

Appropriation . . . . . 125,000 00

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\$390,710 85

## EXPENDITURES AS SHOWN BY THE FOLLOWING STATEMENT

### *Eastern Division.*

Section 1, Erie..... \$4,519 56

Section 2, Erie..... 5,685 00

Section 3, Erie..... 12,340 92

Section 4, Erie..... 5,396 98

Section 1, Champlain 2,394 91

Section 2, Champlain 10,310 47

Section 3, Champlain 826 98

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\$41,474 82

### *Middle Division.*

Division . . . . . \$7,437 57

Section 5, Erie..... 12,307 60

Section 6, Erie..... 42,855 33

Section 7, Erie..... 2,900 58

Oswego . . . . . 5,198 14

Cayuga and Seneca.. 12,663 89

Black river . . . . . 14,020 08

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97,383 19

*Western Division.*

Section 8, Erie....	\$4,159 30	
Section 9, Erie....	23,973 78	
Section 10, Erie....	4,446 37	
Section 11, Erie....	11,362 41	
	<hr/>	\$43,941 86
		<hr/>
		\$182,799 87
		<hr/>
Available balance January 1, 1909.....		\$207,910 98
		<hr/>
		<hr/>

## STATEMENT NO. 7.

Statement of Payments made by the Superintendent of Public Works, under Legislative acts, for the purposes therein stated, from January 1, 1908, to January 1, 1909.

## (Chapter 466, Laws 1908.)

For the purpose of repairing and protecting the dam on Beaver river at Stillwater, Herkimer county:

Expended by division superintendent . . . . .	\$4,713 26	
	<hr/>	\$4,713 26

## (Chapter 465, Laws 1908.)

For the compensation of gate-tenders of the State dams upon the Beaver and Moose rivers:

Gate-tenders . . . . .	\$1,100 00	
	<hr/>	1,100 00

## (Chapters 578 and 466, Laws 1907 and 1908.)

For the services and expenses of agent in defense of claims against the State on account of canals, Matthew A. Heeran...

\$12,700 07	
<hr/>	12,700 07

## (Chapter 267, Laws 1908.)

For improvement of the Cayuga  
Inlet in the city of Ithaca, and  
the repair and reconstruction  
of the bridges over the same:

United Construction Company, contractor . . . . .	\$1,908 75	
Expended by division superintend- ent. . . . .	25,468 77	
Advertising . . . . .	42 00	
	<hr/>	\$27,419 52

## (Chapters 672 and 203, Laws of 1906 and 1908.)

For the construction of an aque-  
duct under the Erie canal at  
Durhamville:

Theo. F. Kalbfleisch, contractor.	\$46,143 00	
Expended by division superintend- ent. . . . .	9,649 20	
Advertising . . . . .	69 00	
Inspection . . . . .	955 46	
	<hr/>	56,816 66

## (Chapter 578, Laws 1907.)

For cleaning out State ditches  
along the Erie and Champlain  
canals, to prevent further over-  
flow of land and damage to pri-  
vate property in the vicinity of  
said ditches:

Expended on Eastern Division...	\$5,029 17	
Expended on Middle Division ....	5,209 30	
Expended on Western Division...	4,290 38	
	<hr/>	14,528 85

(Chapters 577 and 465, Laws of 1907 and 1908.)

For the operation, maintenance  
and repair of the drawbridge  
spanning Wappinger creek in  
the village of New Hamburg,  
Dutchess county:

Bridgetender, salary .....	\$400 00	
Repairs and supplies .....	33 60	
	<hr/>	\$433 60

(Chapter 288, Laws 1908.)

Repair of the dock at Dresden,  
Yates county, used by the Wil-  
lard State Hospital:

Henry Tosh & Son, contractor...	\$802 87	
Advertising . . . . .	32 00	
	<hr/>	834 87

(Chapters 578 and 466, Laws 1907 and 1908.)

For the salary and necessary travel-  
ing expenses of an engineer to  
be employed by the Superin-  
tendent of Public Works to act  
in an advisory capacity:

Joseph Ripley . . . . .	\$10,000 00	
	<hr/>	10,000 00

(Chapters 578 and 466, Laws 1907 and 1908.)

For constructing, repairing and  
maintaining highways and  
bridges on the various Indian  
reservations of the State:

St. Regis Indian reservation....	\$873 86
Allegany Indian reservation....	1,872 95
Cattaraugus Indian reservation..	2,739 57
Oil Spring Indian reservation...	200 00
Onondaga Indian reservation....	2,496 22

Tonawanda Indian reservation...	\$3,701 05	
Tuscarora Indian reservation.....	154 50	
Tuscarora Indian reservation, A. J. Rockwood, contractor .....	3,500 00	
Tuscarora Indian reservation, Ad- vertising . . . . .	31 50	
	<hr/>	\$15,569 65

(Chapters 577 and 465, Laws 1907 and 1908.)

For the salaries and necessary traveling expenses and supplies of inspectors of steam vessels:		
Salaries . . . . .	\$6,000 00	
Traveling expenses, etc. . . . .	1,411 92	
	<hr/>	7,411 92

(Chapters 483, Laws 1906, and 203 and 266, Laws 1908.)

For the erection of a lighthouse at the outlet of Lake Keuka, and for the repair of the pier in such outlet, near the village of Penn Yan:		
Rochester Bridge and Construc- tion Co., contractor, for con- structing a lighthouse at the outlet of Keuka lake.....	\$311 30	
Henry Tosh & Son, contractor for foundation and walk for light tower at outlet of Keuka lake, vicinity of Penn Yan.....	1,001 25	
Advertising . . . . .	26 00	
	<hr/>	1,338 55

(Chapter 575, Laws 1907.)

For the repair of the bridge  
known as Montezuma Turnpike  
bridges, over the Seneca river  
in the county of Seneca:



Henry Tosh & Son, contractor...	\$1,716 25	
Advertising . . . . .	26 00	
Inspection . . . . .	68 70	
Expended by the Superintendent of Public Works, for fill to ap- proaches of both bridges, and painting wheel guard, rails, posts, braces and outside stringer . . . . .	425 00	
	<hr/>	\$2,235 95

(Chapters 577 and 465, Laws 1907 and 1908.)

For the compensation of the tender  
and for the maintenance and  
operation of the drawbridge over  
Minisceongo creek, Rockland  
county:

Bridge tender . . . . .	\$600 00	
Expended by division superin- tendent for repairs . . . . .	246 95	
Supplies . . . . .	18 70	
	<hr/>	865 65

(Chapter 466, Laws 1908.)

For the repair and improvement  
of the State road known as the  
North Lake road, running from  
Forestport, Oneida county, to  
the North Lake reservoir, Her-  
kimer county:

Expended by division superin- tendent . . . . .	\$7,555 32	
	<hr/>	7,555 32

(Chapter 576, Laws 1907.)

For the construction of a stone or  
concrete retaining wall on the

northerly side of Oneida creek,  
in the village of Oneida Castle:  
Expended by division superin-  
tendent . . . . . \$4,171 32

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\$4,171 32

(Chapter 282, Laws 1908.)

For the repair of and extension to  
the sea wall at the foot of  
Owasco lake, in Cayuga county:  
Expended by division superin-  
tendent . . . . . \$5,118 27

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5,118 27

(Chapters 668 and 203, Laws 1906 and 1908.)

For the construction of a new lift  
or hoist bridge over the Oswego  
canal at North Salina street, in  
the city of Syracuse:  
John M. Shultz, contractor . . . . . \$60,228 00  
Inspection . . . . . 1,116 00

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61,344 00

Of this amount, \$61,344, there  
was paid \$43,750, provided for as  
follows: By the city of Syracuse,  
\$31,250, and by the Syracuse  
Rapid Transit Railway Company,  
\$12,500.

(Chapters 675, 400 and 394, Laws 1906, 1907 and 1908.)

For the reconstruction of the west  
wing of the coffer dam at the  
outlet of Skaneateles lake, in  
the county of Onondaga:  
John Young and Patrick J. Caw-  
ley, contractors . . . . . \$9,999 00

Advertising .....	\$42 00	
Inspection .....	216 00	
	<hr/>	\$10,257 00

## (Chapter 577, Laws 1907.)

For constructing stairways for the  
lift bridge at Catherine street,  
Syracuse:

National Construction Co., con- tractor .....	\$675 00	
	<hr/>	675 00

Paid out of funds provided by  
the city of Syracuse.

## (Chapter 578, Laws 1907.)

For cleaning out Steel creek, in  
the village of Ilion, and con-  
structing a retaining wall for  
the same between the Armory  
dam and the State dam in said  
village:

Expended by division superin- tendent .....	\$1,161 63	
	<hr/>	1,161 63

## (Chapter 466, Laws 1908.)

For removing dead and floating  
timber and clearing and render-  
ing safe Saranac river and its  
tributaries between Lake Flower  
and the State dam, in township  
twenty-four, Franklin county:

Expended by Superintendent of Public Works .....	\$4,898 55	
	<hr/>	4,898 55

## (Chapter 466, Laws 1908.)

For the repair and improvement of  
the highway known as the State  
road, between South Colton and  
Piercefield, in St. Lawrence  
county:

Expended by Superintendent of Public Works . . . . .	\$3,961 40	
	<hr/>	\$3,961 40

## (Chapter 466, Laws 1908.)

Repair of bridges over Twitchell  
creek, to restore the Lake Cham-  
plain and Carthage highway to  
usefulness:

Expended by division superin- tendent . . . . .	\$8,936 71	
	<hr/>	8,936 71

## (Chapter 265, Laws 1908.)

For the construction of a steel  
bridge over the Champlain canal  
and approaches thereto, at Mo-  
hawk street, Waterford:

John W. Flynn, contractor . . . . .	\$13,770 00	
Advertising . . . . .	26 00	
Inspection . . . . .	306 44	
	<hr/>	14,102 44
		<hr/>
		\$278,150 19

## STATEMENT NO. 8.

Statements of payments made by the Superintendent of Public  
Works from January 1, 1908, to January 1, 1909, under the  
"Barge Canal Act," chapter 147, Laws 1903, and chapter 740,  
Laws 1905.

*Barge Canal Contract No. 1.*

Empire Engineering Corporation, contractor . . . . .	\$29,088 00	
Wm. L. Austin, attorney-in-fact for the Empire Engineering Corporation, contractor . . . . .	70,470 00	
	<hr/>	\$99,558 00

*Barge Canal Contract No. 2.*

Ferguson Contracting Co., con- tractor. . . . .	\$238,311 00	
Extra or unspecified work, see Canal Board proceedings Sep- tember 1 and November 24, 1908 . . . . .	28,965 74	
Recording appropriations of land.	85	
	<hr/>	267,277 59

*Barge Canal Contract No. 3.*

Sundstrom & Stratton, contractor.	\$65,293 06	
Extra or unspecified work, see Canal Board proceedings Janu- ary 29, March 4, September 1, October 21 and November 17, 1908 . . . . .	39,013 76	
	<hr/>	104,306 82

*Barge Canal Contract No. 4.*

Empire Engineering Corporation, contractor . . . . .	\$74,844 00	
Wm. L. Austin, attorney-in-fact for the Empire Engineering Corporation, contractor . . . . .	130,824 00	
Recording appropriations of land.	1 50	
	<hr/>	205,669 50

*Barge Canal Contract No. 5.*

Wm. L. Austin, attorney-in-fact for the Empire Engineering Corporation, contractor . . . . .	\$180 00	
Recording appropriations of land.	1 50	
Fencing at Mosquito Point Bridge	332 73	
	<hr/>	\$514 23

*Barge Canal Contract No. 6.*

F. A. Maselli, contractor. . . . .	\$199,962 00	
	<hr/>	199,962 00

*Barge Canal Contract No. 7.*

Groton Bridge Co., contractor. . .	\$30,285 00	
Extra or unspecified work, see Canal Board Proceedings July 21, 1908 . . . . .	49 50	
	<hr/>	30,334 50

*Barge Canal Contract No. 8.*

The Pittsburg-Eastern Co., con- tractor . . . . .	\$271,017 00	
Recording appropriations of land.	2 25	
	<hr/>	271,019 25

*Barge Canal Contract No. 9.*

Thomas Crimmins Contracting Co., contractor . . . . .	\$100,179 00	
Advertising . . . . .	716 10	
	<hr/>	100,895 10

*Barge Canal Contract No. 10.*

Mosier & Summers, contractors. .	\$120,375 00	
Extra or unspecified work, see Canal Board proceedings July 21, 1908 . . . . .	1,198 00	
Recording appropriation of land.	2 00	
	<hr/>	121,575 00

*Barge Canal Contract No. 11.*

Fort Orange Construction Co.,		
contractor . . . . .	\$72,468 00	
National Commercial Bank of		
-Albany, attorney-in-fact for		
Fort Orange Construction Co..	202,140 00	
	<hr/>	\$274,608 00

*Barge Canal Contract No. 12.*

Stewart-Kerbaugh-Shanley Co.,		
contractor . . . . .	\$401,517 00	
Recording appropriations of land.	50 75	
	<hr/>	401,567 75

*Barge Canal Contract No. 13.*

Advertising . . . . .	\$163 66	
	<hr/>	163 66

*Barge Canal Contract No. 14.*

Acme Engineering and Contract-		
ing Co., assignee of Arthur W.		
Luce, contractor . . . . .	\$618,282 00	
Extra or unspecified work, see		
Canal Board proceedings Sep-		
tember 1 and October 21, 1908.	2,506 01	
Recording appropriations of land.	33 50	
	<hr/>	620,821 51

*Barge Canal Contract No. 15.*

The National Commercial Bank	
of Albany, attorney-in-fact for	
Atlantic, Gulf and Pacific Co.,	
Contractor . . . . .	\$566,118 00
Extra or unspecified work, see	
Canal Board proceedings June	

11th, September 1st and October 21, 1908 . . . . .	\$5,500 00	
Recording appropriations of land.	2 25	
	<hr/>	\$571,620 25

*Barge Canal Contract No. 16.*

United Construction Co., Contractor . . . . .	\$2,385 00	
	<hr/>	2,385 00

*Barge Canal Contract No. 17 (Scofield).*

Expended by the Superintendent of Public Works for construction, temporary protection, removal of plant and removal of coffer dams . . . . .	\$12,321 53	
	<hr/>	12,321 53

*Barge Canal Contract No. 17 (Murdoch).*

Alexander Murdoch, Contractor..	\$208,308 85	
Advertising . . . . .	337 55	
	<hr/>	208,646 40

*Barge Canal Contract No. 18.*

O'Brien & Hoolihan Contracting Co., Contractor . . . . .	\$179,964 00	
Extra or unspecified work, see Canal Board proceedings, January 29, July 21, and October 21, 1908 . . . . .	11,805 60	
	<hr/>	191,769 60

*Barge Canal Contract No. 19.*

Great Lakes Construction Co., Contractor . . . . .	\$104,733 00	
Extra or unspecified work, see Canal Board proceedings July 21, 1908 . . . . .	300 00	



Recording appropriations . . . . .	\$2 00	
	<hr/>	\$105,035 00

*Barge Canal Contract No. 20.*

Advertising . . . . .	\$361 08	
	<hr/>	361 08

*Barge Canal Contract No. 25.*

The National Commercial Bank of Albany, attorney-in-fact for the Atlantic, Gulf and Pacific Co., Contractor . . . . .	\$367,425 00	
Recording appropriations . . . . .	15 06	
	<hr/>	367,440 06

*Barge Canal Contract No. 26.*

Lake Erie Dredging Co., Con- tractor . . . . .	\$8,676 00	
Advertising . . . . .	350 90	
Recording appropriations . . . . .	2 37	
	<hr/>	9,029 27

*Barge Canal Contract No. 27.*

Kinser Construction Co., Con- tractor . . . . .	\$278,226 00	
Extra or unspecified work, see Canal Board proceedings May 26, July 21, and September 1, 1908 . . . . .	12,132 68	
Recording appropriations of land.	75	
Clay for break at Fort Edward lock .. . . .	178 00	
	<hr/>	290,537 43

*Barge Canal Contract No. 31.*

Casey & Murray, Contractor....	\$9,207 00	
Advertising . . . . .	330 35	
Recording appropriations of land.	50	
	<hr/>	\$9,537 85

*Barge Canal Contract No. 34.*

M. Fitzgerald, Contractor .....	\$5,382 00	
	<hr/>	5,382 00

*Barge Canal Contract No. 35.*

Gilmour-Horton-Allen Co., Con- tractor . . . . .	\$69,768 00	
Recording appropriations of land.	12 00	
	<hr/>	69,780 00

*Barge Canal Contract No. 45.*

Scott Bros., Contractor .....	\$105,426 00	
Advertising . . . . .	157 37	
Recording appropriations of land.	34 50	
	<hr/>	105,617 87

*Barge Canal Contract No. 55.*

Advertising . . . . .	\$163 67	
	<hr/>	163 67

*Barge Canal Contract No. 60.*

Empire Engineering Corporation, Contractor . . . . .	\$56,655 00	
Wm. L. Austin, attorney-in-fact for Empire Engineering Cor- poration, Contractor.....	1,215 00	
Advertising . . . . .	199 05	
	<hr/>	58,069 05

*Barge Canal Contract No. 61.*

Cleveland &amp; Sons Co., assignee of

E. M. Graves, Contractor....	\$441 00
Advertising . . . . .	163 67

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 604 67
*Barge Canal Contract No. 64.*

Empire Engineering Corporation,

Contractor . . . . .	\$14,229 00
Advertising . . . . .	356 42

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 14,585 42
*Barge Canal Contract No. 66.*

Empire Engineering Corporation,

Contractor . . . . .	\$2,232 00
Advertising . . . . .	203 73

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 2,435 73
*Barge Canal Contract No. 68.*

Recording appropriations of land.	\$0 75
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 \$0 75
*General Expenses.*

Special agent engaged in the preparation of notices of appropriations of land, to be served on, and serving the same on owners, filing in the offices of the clerks of the counties where land is situated; also the preparation of and execution of contracts, and filing the labor bonds in the office of the clerks of the counties in which the contract area is located . . . . .

\$1,811 62

Paid watchmen on temporary canal at Mindenville, Montgomery county . . . . .

1,857 00

Oil for above canal.....	\$29 66	
Paid Dennis Beebo, Jr., for the removal of the Holcomb build- ing located on William street, Whitehall, from the site of Barge Canal Contract No. 15.	250 00	
Paid Marion D. Totten for dam- age done to crops and woods on lands situated in vicinity of New London, by engineering force engaged in making sur- veys and borings for Barge canal work, as per agreement and release .....	35 00	
		<hr/> \$3,983 28
		<hr/> \$4,727,578 82
		<hr/> <hr/>

## STATEMENT No. 9.

Statement of Moneys Paid into the State Treasury by the Super-  
intendent of Public Works from January 1, 1908, to January  
1, 1909.

Received from David H. Lewis,  
Assistant Superintendent, for  
privileges granted for cutting  
ice, and for other purposes:

From Retallick & McBain, ice..	\$31 25
From M. D. Horton, ice.....	75 00
From W. J. Currie, ice.....	18 75
From Wm. Shorer, ice.....	3 60
From Katherine G. McDonald, ice .....	187 50
From D. McCarthy & Son, ice..	68 75
From S. Dotter Estate, ice.....	197 50
From Daniel Norton, ice.....	395 00
From Oathout & Tafft, ice.....	31 25
From William A. Cary, ice....	18 75

From W. M. Carpenter, ice....	\$12 50	
From Joseph Nadler, ice .....	6 25	
From L. Bierbauer, ice.....	18 75	
From Albert Cole, ice.....	25 00	
From John Ergong, ice.....	15 00	
From Leonard Doty, ice.....	5 00	
		<hr/>
		\$1,109 85
From Captain LaFountain for services of steam pump, in pumping boat "Guindon," in Champlain canal south of Whitehall.....		40 00
From Postal Telegraph-Cable Co. for services of tug crew in assisting tug "J. W. Morse"..		30 85
		<hr/>
		\$1,180 70

Received from Charles C. Barrett,  
Assistant Superintendent, for  
privileges granted for cutting  
ice and for other purposes:

From Laemmle Dairy Co., ice..	\$12 50	
From Boonville Milk and Cream Co., ice .....	11 20	
From Mutual Milk and Cream Co., ice .....	13 60	
From Fred Smith, ice .....	16 00	
From Wm. Commerford, ice....	1 28	
From N. M. Sargent's Sons, ice.	80	
From Samuel Platt, ice.....	1 60	
From M. H. Wetmore, ice.....	80	
From Fred R. Peck, ice.....	75 00	
		<hr/>
		132 78
From J. A. Fiske, Section Super- intendent, for sale of old plank taken from the Illingsworth bridge .....	\$10 00	
From the O. M. Edwards Co., for 195 loads of earth taken from the work in connection with the culvert over Onondaga creek..	19 50	

From A. B. Hallett, Section Superintendent, for sale of old rope and iron to Auburn Iron Co. . . . .	\$38 08	
	<hr/>	\$200 36
Received from Oscar H. Peacock, Assistant Superintendent, for privileges granted for cutting ice, and for other purposes:		
From D. E. Clair, ice . . . . .	\$105 00	
From M. A. Miller, ice. . . . .	50 00	
From Brighton Place Dairy Co., ice . . . . .	25 00	
From J. M. Volkmar, ice. . . . .	10 00	
From Fred Weighner, ice. . . . .	10 00	
From Peter Miller, ice . . . . .	10 00	
	<hr/>	210 00
From Charles Elam, Rochester, for services rendered in pump- ing out sand boat "H. M. Claffen," and delivering it at dry-dock in Rochester. . . . .	\$10 00	
From Charles L. Papworth, Sec- tion Superintendent, for sale of old iron . . . . .	60 00	
From R. A. Vanderboget, Section Superintendent, for sale of old iron and rope. . . . .	30 77	
	<hr/>	310 77
From Asa M. Williams, Canal Collector, Buffalo, for collec- tions at Black Rock sloop lock during the season of 1907. . . .	\$12 50	
From Asa M. Williams, Canal Collector, Buffalo, for collec- tions at Black Rock sloop lock during the season of 1908. . . .	10 50	

From Schenectady Contracting Co., for rental of State land situated on the berme side of the Erie canal between Nott street and Jefferson street, in the city of Schenectady, from February 1, 1908, to February 1, 1909 .....	\$300 00
From F. A. Maselli, for sale of buildings on site of Barge Canal Contract No. 6, as follows:	
House and barn formerly owned by Florence and Hannah Beckwith, located on parcel No. 308, and house and shed formerly owned by Wm. G. Rapp, located on parcel No. 64.....	200 00
From W. F. Marvin, of Baldwinsville, for sale of old steel bridge existing across the proposed route of Barge canal, on the site of Contract No. 45, at Baldwinsville .....	50 00
From Andrew Seigel, R. F. D. No. 5, Rome, for sale of two barns and other small outbuildings, formerly owned by O. C. Tuttle, and located on parcel No. 883 of Barge Canal Contract No. 4, and situated in the town of Rome, conditioned on his removing the same without expense to the State, and abating all nuisances.....	100 00
From Great Lakes Construction Co., Buffalo, N. Y., for sale of one boatload of stone taken	

from the site of Barge Canal Contract No. 19.....	\$30 00	
From Frank A. Maselli, for sale of barn appropriated from W. G. Rapp, in the town of Gates, Monroe county, situated on par- cel No. 753, on the site of Barge Canal Contract No. 6..	40 00	
From G. S. Hall, Little Falls, for sale of buildings, outhouses and other structures, located on State land at Little Falls, in the vicinity of Lock No. 39, and within the site of Barge Canal Contract No. 31, and formerly maintained by the C. B. Leigh Estate .. . . .	200 00	
From Mrs. Lena Kennedy, Ful- ton, N. Y., for sale of building situated on parcel No. 586, on site of Barge Canal Contract No. 10, in the city of Fulton, the building to be removed from the contract site by her.....	200 00	
		\$1,143 00
From W. S. Van Keuren, Inspec- tor of Steam Vessels, for fees collected for inspection of steam vessels, and issuing of original and renewal of licenses, pursu- ant to chapter 359, Laws 1905:		
1908.		
April. . . . .	\$54 00	
May. . . . .	374 50	
June. . . . .	696 50	
July. . . . .	751 00	



August . . . . .	\$718 00	
September. . . . .	791 00	
October. . . . .	295 50	
November. . . . .	149 50	
		\$3,830 00
		\$6,664 83

Statement of Proposals Received and Contracts Awarded by the  
Superintendent of Public Works during the year 1908, pur-  
suant to special acts of the Legislature.

(Chapter 577, Laws 1907.)

Repairing the bridge over the Erie canal at  
Bridge street, Amsterdam:

United Construction Co., Albany, N. Y.....	\$2,585 00
Perkins Foundry Co., Amsterdam, N. Y.....	2,660 00
H. H. Peck, Waterford, N. Y.....	3,235 00
Smith & Foster, Amsterdam, N. Y.....	2,405 00
M. Fitzgerald, Hoosick Falls, N. Y.....	2,860 00
Awarded to Smith & Foster.	

(Chapter 575, Laws 1907.)

For repairs to the Montezuma turnpike bridges  
over the Seneca river, in the county of Seneca:

Henry Tosh & Son, Port Byron, N. Y.....	1,786 00
Awarded to Henry Tosh & Son.	

(Chapter 466, Laws 1908.)

For constructing that portion of the Lewiston-  
Dickersonville road passing through the Tusca-  
rora Indian reservation, in the town of Lew-  
iston, Niagara county:

Stewart-Kerbaugh-Shanley Co., New York....	5,376 85
No award.	

(Chapters 675, 400 and 394, Laws 1906, 1907 and 1908.)

For construction of a protection wall on the west side of the Skaneateles lake outlet in the village of Skaneateles, Onondaga county:

Henry Tosh & Son, Port Byron, N. Y.....	\$13,469 40
John Young and Patrick J. Cawley, Syracuse, N. Y. ....	11,983 00
Awarded to John Young and Patrick J. Cawley.	

(Chapter 265, Laws 1908.)

For constructing a plate girder bridge and approaches over the Champlain canal at Mohawk street, Waterford, Saratoga county:

M. Fitzgerald, Hoosick Falls, N. Y.....	20,016 00
John W. Flynn, Waterford, N. Y.....	16,105 15
Awarded to John W. Flynn.	

(Chapter 266, Laws 1908.)

For repairing and constructing crib for light tower, and for building walk to same at the outlet of Keuka lake, in the vicinity of Penn Yan, Yates county:

Henry Tosh & Son, Port Byron, N. Y.....	2,650 38
Awarded to Henry Tosh & Son, upon reducing the proposition to \$2,151.63.	

(Chapter 267, Laws 1908.)

For furnishing and erecting three steel highway bridges over the Cayuga inlet in the city of Ithaca, N. Y., at State, Seneca and Buffalo streets:

McClintock-Marshall Construction Co., Pottstown, Pa., State street.....	7,000 00
United Construction Co., Albany, N. Y., high truss, State street. ....	7,461 00
United Construction Co., Albany, N. Y., low truss, State street. ....	7,635 00

Montour Steel Co., Montour Falls, N. Y., State street . . . . .	\$8,983 00
Lewis F. Shoemaker & Co., Philadelphia, Pa., State street . . . . .	8,765 00
Groton Bridge Co., Groton, N. Y., State street..	8,534 00
Penn Bridge Co., Beaver Falls, Pa., State street.	11,240 00
McClintock-Marshall Construction Co., Pottstown, Pa.; Seneca street. . . . .	5,700 00
United Construction Co., Albany, N. Y., Seneca street . . . . .	6,274 00
Montour Steel Co., Montour Falls, N. Y., Seneca street . . . . .	6,810 00
Lewis F. Shoemaker & Co., Philadelphia, Pa., Seneca street. . . . .	6,994 00
Groton Bridge Co., Groton N. Y., Seneca street.	7,162 00
Penn Bridge Co., Beaver Falls, Pa., Seneca street. . . . .	8,970 00
McClintock-Marshall Construction Co., Pottstown, Pa., Buffalo street. . . . .	5,700 00
United Construction Co., Albany, N. Y., Buffalo street . . . . .	6,274 00
Montour Steel Co., Montour Falls, N. Y., Buffalo street . . . . .	6,810 00
Lewis F. Shoemaker & Co., Philadelphia, Pa., Buffalo street . . . . .	6,994 00
Groton Bridge Co., Groton, N. Y., Buffalo street	7,162 00
Penn Bridge Co., Beaver Falls, Pa., Buffalo street . . . . .	8,970 00
Awarded to United Construction Co. for the three bridges.	

(Chapter 288, Laws 1908.)

For furnishing necessary material for and building boat landing and pier on Seneca lake, at

Dresden, Yates county:

Henry Tosh & Son, Port Byron, N. Y. . . . .	1,250 00
No award.	

## (Chapter 288, Laws 1908.)

For furnishing necessary material for and building boat landing and pier at Dresden, Yates county:

Henry Tosh & Son, Port Byron, N. Y.....	\$898 17
Awarded to Henry Tosh & Son upon reducing the proposition to \$798.48.	

## (Chapter 291, Laws 1908.)

For constructing a lift bridge over the Erie canal at Allen street, Rochester, N. Y.:

M. Fitzgerald, Hoosick Falls, N. Y.....	29,689 50
W. J. Burns Co., Syracuse, N. Y.....	31,070 00
Penn Bridge Co., Beaver Falls, Pa.....	36,990 50
Montour Steel Co., Montour Falls, N. Y.....	48,002 90
Houston, Barnard, Rochester, N. Y.....	37,453 00
No award.	

## (Chapter 287, Laws 1908.)

For constructing a lift bridge over the Erie canal at Lyell avenue, Rochester, N. Y.:

W. J. Burns Co., Syracuse, N. Y.....	36,970 40
Owego Bridge Co., Owego, N. Y.....	44,775 00
Penn Bridge Co., Beaver Falls, Pa.....	33,375 00
Seneca Engineering Co., Montour Falls, N. Y..	46,715 00
Houston, Barnard, Rochester, N. Y.....	35,392 00
Awarded to W. J. Burns Co.	

## (Chapter 281, Laws 1908.)

For constructing a plate-girder bridge over the outlet of Cazenovia lake, at Mill street, Cazenovia, Madison county:

Montour Steel Co., Montour Falls, N. Y.....	4,041 50
United Construction Co., Albany, N. Y.....	4,065 50
W. J. Burns Co., Syracuse, N. Y.....	4,680 25
Awarded to Montour Steel Co.	

Statement of Proposals received and Contracts Awarded by the

Superintendent of Public Works, during the year 1908, paid from funds provided for the Ordinary and Extraordinary Repairs of the Canals.

(Chapters 577 and 171, Laws 1907.)

For furnishing timber and plank for use on the

Eastern Division of the State canals:

H. V. Berry, Fort Plain, N. Y., all kinds.....	\$27,159 35
C. R. Snell, Herkimer, N. Y., all kinds.....	28,445 50
G. Elias & Bro., Buffalo, N. Y., all kinds.....	30,152 50
W. J. Dowdle, Oswego, N. Y., white oak and Georgia pine .....	19,242 50
The Newton Fisher Lumber Co., Buffalo, N. Y., beech or maple .....	1,320 00
Awarded to H. V. Berry.	

For furnishing timber and plank for use on the

Middle Division of the State canals:

H. V. Berry, Fort Plain, N. Y., all kinds.....	15,412 00
C. R. Snell, Herkimer, N. Y., all kinds.....	14,641 50
W. J. Dowdle, Oswego, N. Y., all kinds.....	14,347 00
G. Elias & Bro., Buffalo, N. Y., all kinds.....	15,074 20
The Newton Fisher Lumber Co., Buffalo, N. Y., spruce, hemlock, and beech or maple.....	5,933 50
Awarded to W. J. Dowdle.	

For furnishing timber and plank for use on the

Western Division of the State canals:

C. R. Snell, Herkimer, N. Y., all kinds.....	20,561 50
G. Elias & Bro., Buffalo, N. Y., all kinds.....	21,509 50
The Newton Fisher Lumber Co., Buffalo, N. Y., all kinds .....	31,134 50
H. V. Berry, Fort Plain, N. Y., Georgia pine and spruce .....	6,642 00
W. J. Dowdle, Oswego, N. Y., white oak, Georgia pine and spruce.....	15,593 00
Awarded to C. R. Snell.	

Statement of Proposals Received and Contracts Awarded by the Superintendent of Public Works during the year 1908, pursuant to Chapter 147, Laws 1903, and Chapter 740, Laws 1905, known as "Barge Canal Act."

*Barge Canal Contract No. 9.*

Lake Erie Dredging Co., Buffalo, N. Y. . . . . \$796,269 00  
 No award.

*Barge Canal Contract No. 17.*

Alexander Murdoch, Baltimore Md. . . . . 804,515 76  
 Awarded to Alexander Murdoch.

*Barge Canal Contract No. 9.*

Walsh Construction Co., Davenport, Ia. . . . . 789,654 00  
 Thomas Crimmins Contracting Co., New York. 766,395 00  
 Awarded to Thomas Crimmins Contracting  
 Co., upon reducing proposition to \$755,995.

*Barge Canal Contract No. 26.*

Lake Erie Dredging Co., Buffalo, N. Y. . . . . 59,795 00  
 Empire Engineering Corporation, New York. . . 66,245 00  
 Awarded to Lake Erie Dredging Co.

*Barge Canal Contract No. 20.*

No bids received.

*Barge Canal Contract No. 45.*

Scott Bros., Atlanta Ga. . . . . 467,513 50  
 Awarded to Scott Bros.

*Barge Canal Contract No. 64.*

No bids received.

*Barge Canal Contract No. 60.*

Empire Engineering Corporation, New York. . . 1,349,084 00  
 Awarded to Empire Engineering Corporation.

*Barge Canal Contract No. 64.*

Empire Engineering Corporation, New York. . . 1,290,492 00  
 Awarded to Empire Engineering Corporation.

*Barge Canal Contract No. 31.*

Fidelity Construction Co., Detroit, Mich. . . . . 837,988 00

Williams Engineering & Contracting Co., New York .....	\$850,594 33
Casey & Murray, Rochester, N. Y.....	829,770 43
Coast and Interior Contracting Co., Fayetteville, N. Y. . . . .	881,318 00
John Pierce Co., New York.....	864,655 33
Awarded to Casey & Murray.	

*Barge Canal Contract No. 20.*

No bids received.

*Barge Canal Contract No. 66.*

Empire Engineering Corporation, New York...	750,685 50
E. M. Graves, Cleveland, Ohio.....	791,191 00
Awarded to Empire Engineering Corporation.	

*Barge Canal Contract No. 13.*

The Lane Bridge Co., Painted Post, N. Y.....	25,325 00
The United Construction Co., Albany, N. Y....	27,052 50
M. Fitzgerald, Hoosick Falls, N. Y.....	28,039 50
Penn Bridge Co., Beaver Falls, Pa.....	23,676 00
L. F. Shoemaker & Co., Philadelphia, Pa.....	29,145 00
J. M. & J. B. Cornell Co., New York.....	26,265 78
Groton Bridge Co., Groton, N. Y.....	26,478 00
McClintock-Marshall Construction Co., Pottstown, Pa. . . . .	24,163 00
Montour Steel Co., Montour Falls, N. Y.....	26,272 50
Awarded to the Penn Bridge Co.	

*Barge Canal Contract No. 55.*

Coast and Interior Contracting Co., Fayetteville, N. Y. . . . .	989,433 00
Booth & Flinn, Ltd., and Dravo Contracting Co., Pittsburg, Pa. . . . .	1,067,533 00
Miller Construction Co., Lock Haven, Pa.....	1,021,804 00
MacArthur Bros. Co., New York.....	956,420 90
Stewart-Kerbaugh-Shanley Co., New York....	946,205 00

Scott Bros., Baldwinsville, N. Y.....	\$977,369 00
Kinser Construction Co., Chicago, Ill.....	1,082,750 00
Gore Engineering and Contracting Co., New York . . . . .	932,981 00
United Engineering and Contracting Co., New York . . . . .	1,009,829 00
Lanquist & Illsley, Chicago, Ill.....	1,025,145 00
Arthur McMullen, New York.....	905,347 00
Buffalo Dredging Co., Buffalo, N. Y.....	933,577 00
Awarded to Arthur McMullen.	

*Barge Canal Contract No. 61.*

E. M. Graves, Cleveland, Ohio.....	1,047,994 00
Empire Engineering Corporation . . . . .	1,092,748 00
Awarded to E. M. Graves.	

*Barge Canal Contract No. 40.*

Buffalo Dredging Co., Buffalo, N. Y.....	2,306,702 00
Mason & Hanger Co., and Miller & Lupton Co., New York . . . . .	2,283,113 00
MacArthur Bros. Co., New York.....	2,199,026 34
United Engineering and Contracting Co., New York . . . . .	2,166,298 00
American Pipe Manufacturing Co., Philadel- phia, Pa. . . . .	2,247,358 40
Awarded to United Engineering and Contract- ing Co.	

*Barge Canal Contract No. 46.*

P. Sanford Ross, Inc., Jersey City, N. J.....	1,464,218 00
Kinser Construction Co., Chicago, Ill., and Fort Edward, N. Y.....	1,212,833 00
The Crowell & Sherman Co., Cleveland, Ohio...	1,251,072 20
Shanley-Morrissey, Inc., New York.....	1,330,710 00
North American Dredging Co., New York.....	1,267,408 00
American Pipe Manufacturing Co., Philadel- phia, Pa. . . . .	1,362,400 40
Booth & Flinn, Ltd., Pittsburg, Pa.....	1,274,830 50
Awarded to the Kinser Construction Co.	



*Barge Canal Contract No. 41.*

Scott Bros., Baldwinsville, N. Y.....	\$338,735 00
Whitmore, Rauber & Vicinus, Rochester, N. Y..	347,210 00
Ryan & Hannington, New York.....	361,750 00
Miller Construction Co., Lock Haven, Pa.....	299,400 00
Acme Engineering and Contracting Co., Schenectady, N. Y.....	384,225 00
Morris Kantrowitz, Albany, N. Y.....	336,530 00
Sherman, Parker & Beebe, Utica, N. Y.....	345,590 00
Sundstrom & Stratton Co., New York.....	335,718 00
Wm. J. Olver, Knoxville, Tenn.....	324,230 00
Booth & Flinn, Ltd., Pittsburg, Pa.....	355,890 00
Mason & Hanger Co., and Millard & Lupton Co., New York . . . . .	331,660 00
Arthur McMullen, New York.....	334,310 00
Butler Bros.-Hoff Co., New York.....	281,330 00
Patterson & Co., Pittsburg, Pa.....	398,647 50
American Pipe Manufacturing Co., Philadelphia, Pa. . . . .	353,920 00
Shanley-Morrissey, Inc., New York.....	290,850 00
Clement, King & Co., Philadelphia, Pa.....	362,250 00
M. A. Cleveland, Brockport, N. Y.....	329,590 00
Coast and Interior Contracting Co., Fayetteville, N. Y.....	380,510 00
Awarded to Butler Bros.-Hoff Co.	

*Barge Canal Contract No. 47.*

Booth & Flinn, Ltd., Pittsburg, Pa.....	1,367,418 00
Butler Bros.-Hoff Co., New York.....	1,394,118 00
The Crowell & Sherman Co., Cleveland, O.....	1,262,638 00
American Pipe Manufacturing Co., Philadelphia, Pa. . . . .	1,579,518 00
Awarded to The Crowell & Sherman Co.	

*Barge Canal Contract No. 68.*

F. J. McCain Construction Co., Mercer, Pa....	1,036,023 00
Booth & Flinn, Ltd., Pittsburg, Pa.....	1,123,723 00

Mason & Hanger Co., and Millard & Lupton Co., New York .....	\$1,078,523 00
American Pipe Manufacturing Co., Philadelphia, Pa. ....	1,221,298 40
Shanley-Morrissey, Inc., New York.....	1,018,323 00
Scott Bros., Baldwinsville, N. Y.....	1,114,030 00
MacArthur Bros. Co., New York.....	1,127,983 40
Coast and Interior Contracting Co., Fayetteville, N. Y. . . . .	1,048,878 60
Acme Engineering & Contracting Co., Schenec- tady, N. Y.....	1,290,429 00
Awarded to Shanley-Morrissey, Inc.	

*Barge Canal Contract No. 20.*

Sundstrom & Stratton Co., New York.....	4,973,800 00
American Pipe Manufacturing Co., Philadelphia, Pa. . . . .	4,913,168 00
Not disposed of January 1, 1909.	

Fees collected by the Inspectors of Steam Vessels, for the Inspection of Steam Vessels and Issuing of Original and Renewal Licenses, Pursuant to Chapter 359, Laws of 1905, from January 1, 1908, to January 1, 1909.

For inspection of steamer "Sagamore".....	\$25 00
For inspection of steamer "Mohican".....	25 00
For inspection of steamer "Horicon".....	25 00
For inspection of steamer "City of Fulton".....	12 50
For inspection of steamer "Alert".....	5 00
For inspection of steamer "Wallanick".....	5 00
For inspection of steamer "Ogarita".....	25 00
For inspection of steamer "Oreanna".....	10 00
For inspection of steamer "Island Wonder".....	5 00
For inspection of steamer "Aldrich".....	5 00
For inspection of steamer "Montcalm".....	5 00
For inspection of steamer "Hazel".....	5 00
For inspection of steamer "Comanche".....	5 00
For inspection of steamer "Marguerite".....	5 00

For inspection of steamer "Dick M.".....	\$5 00
For inspection of steamer "Yates".....	25 00
For inspection of steamer "Springstead".....	25 00
For inspection of steamer "Steuben".....	25 00
For inspection of steamer "Spray".....	5 00
For inspection of steamer "Dana".....	7 50
For inspection of steamer "Col. Horton".....	12 50
For inspection of steamer "Chas. Kellogg".....	10 00
For inspection of steamer "F. W. Grant".....	5 00
For inspection of steamer "Busy Bee".....	10 00
For inspection of steamer "Ruth S.".....	10 00
For inspection of steamer "J. Wilson".....	5 00
For inspection of steamer "C. F. B.".....	5 00
For inspection of steamer "Mohawk".....	12 50
For inspection of steamer "Comanche".....	12 50
For inspection of steamer "Iroquois".....	12 50
For inspection of steamer "J. Hamilton".....	10 00
For inspection of steamer "Agnes".....	10 00
For inspection of steamer "Ella H.".....	5 00
For inspection of steamer "C. W. Lodge".....	10 00
For inspection of steamer "Regina".....	10 00
For inspection of steamer "F. C. Stevens".....	10 00
For inspection of steamer "Alice".....	10 00
For inspection of steamer "Kitty West".....	10 00
For inspection of steamer "Alamo II.".....	5 00
For inspection of steamer "Curlew".....	5 00
For inspection of steamer "Nixie".....	5 00
For inspection of steamer "Dolphin".....	5 00
For inspection of steamer "The Scow".....	5 00
For inspection of steamer "Kelso".....	5 00
For inspection of steamer "Glen Haven".....	10 00
For inspection of steamer "Ossahinta".....	10 00
For inspection of steamer "City of Syracuse".....	25 00
For inspection of steamer "Geneva".....	5 00
For inspection of steamer "Colonial".....	12 50
For inspection of steamer "Chic".....	5 00
For inspection of steamer "Fly-on".....	5 00

For inspection of steamer "Fontney".....	\$10 00
For inspection of steamer "Lark".....	5 00
For inspection of steamer "Daniel P.".....	10 00
For inspection of steamer "Annette".....	5 00
For inspection of steamer "Ora".....	5 00
For inspection of steamer "Nymph".....	5 00
For inspection of steamer "Buster Brown".....	5 00
For inspection of steamer "Mona".....	5 00
For inspection of steamer "Water Lilly".....	5 00
For inspection of steamer "Idle Hour".....	5 00
For inspection of steamer "Idler".....	5 00
For inspection of steamer "I. C. U.".....	5 00
For inspection of steamer "Aneta".....	5 00
For inspection of steamer "Oswegatchie".....	7 50
For inspection of steamer "Û-Au-To-Go".....	5 00
For inspection of steamer "Long Branch No. 3"....	7 50
For inspection of steamer "Long Branch No. 1"....	5 00
For inspection of steamer "Cricket".....	12 50
For inspection of steamer "Penn Yan".....	25 00
For inspection of steamer "Lady of the Lake".....	12 50
For inspection of steamer "Dolphin".....	7 50
For inspection of steamer "F. P. Bechtolf".....	10 00
For inspection of steamer "T. W. McAnarney"....	10 00
For inspection of steamer "Irene".....	5 00
For inspection of steamer "Conesus".....	25 00
For inspection of steamer "Edna".....	5 00
For inspection of steamer "Helen".....	5 00
For inspection of steamer "J. A. Ritz".....	10 00
For inspection of steamer "H. T. Jagger".....	10 00
For inspection of steamer "Alice M.".....	7 50
For inspection of steamer "West Queen".....	5 00
For inspection of steamer "Osprey".....	5 00
For inspection of steamer "Gypsey".....	5 00
For inspection of steamer "Seneca".....	25 00
For inspection of steamer "Seneca Shores".....	10 00
For inspection of steamer "Whipple".....	10 00
For inspection of steamer "Rambler".....	7 50

For inspection of steamer "Isabel" .....	\$5 00
For inspection of steamer "Polly" .....	5 00
For inspection of steamer "Wa-ta-wa" .....	5 00
For inspection of steamer "Pathfinder" .....	10 00
For inspection of steamer "Deerslayer" .....	10 00
For inspection of steamer "Mohican" .....	12 50
For inspection of steamer "Hilda" .....	5 00
For inspection of steamer "Pine Grove" .....	5 00
For inspection of steamer "Stella" .....	5 00
For inspection of steamer "Vixen" .....	7 50
For inspection of steamer "Caprice" .....	5 00
For inspection of steamer "Maude W." .....	5 00
For inspection of steamer "May" .....	5 00
For inspection of steamer "Niagara" .....	5 00
For inspection of steamer "Volunteer" .....	5 00
For inspection of steamer "Leona" .....	5 00
For inspection of steamer "Mizpah" .....	5 00
For inspection of steamer "Monitor" .....	5 00
For inspection of steamer "Carrie Mae" .....	5 00
For inspection of steamer "Eleanor" .....	5 00
For inspection of steamer "Elk" .....	5 00
For inspection of steamer "Esther" .....	5 00
For inspection of steamer "Lottie" .....	10 00
For inspection of steamer "Helen D." .....	5 00
For inspection of steamer "J. T. Durham" .....	5 00
For inspection of steamer "Oregon" .....	5 00
For inspection of steamer "I-da-ho" .....	5 00
For inspection of steamer "U-Auto-Go" .....	5 00
For inspection of steamer "Florence" .....	10 00
For inspection of steamer "Florence M." .....	5 00
For inspection of steamer "Geo. E. Kipp" .....	5 00
For inspection of steamer "Winslow" .....	5 00
For inspection of steamer "C. F. Kline" .....	5 00
For inspection of steamer "F. D. Howland" .....	7 50
For inspection of steamer "Mary Louise" .....	5 00
For inspection of steamer "Harrio" .....	5 00
For inspection of steamer "White Top" .....	5 00
For inspection of steamer "Eagle" .....	5 00

For inspection of steamer "Wilgo" . . . . .	\$5 00
For inspection of steamer "Antlers" . . . . .	5 00
For inspection of steamer "Ruth" . . . . .	5 00
For inspection of steamer "Clio" . . . . .	7 50
For inspection of steamer "Elizabeth" . . . . .	7 50
For inspection of steamer "Jessie" . . . . .	5 00
For inspection of steamer "Glen Lake" . . . . .	5 00
For inspection of steamer "Frances" . . . . .	5 00
For inspection of steamer "Katrina" . . . . .	5 00
For inspection of steamer "Edith" . . . . .	5 00
For inspection of steamer "Marguerite" . . . . .	5 00
For inspection of steamer "Locust" . . . . .	7 50
For inspection of steamer "Silver Heels" . . . . .	5 00
For inspection of steamer "Katrina" . . . . .	7 50
For inspection of steamer "Philena" . . . . .	5 00
For inspection of steamer "Roma" . . . . .	5 00
For inspection of steamer "Gipsy" . . . . .	5 00
For inspection of steamer "Ella" . . . . .	5 00
For inspection of steamer "Agnes" . . . . .	5 00
For inspection of steamer "Alice" . . . . .	5 00
For inspection of steamer "Grace" . . . . .	5 00
For inspection of steamer "Oneita" . . . . .	7 50
For inspection of steamer "Gladys" . . . . .	5 00
For inspection of steamer "Mohawk" . . . . .	5 00
For inspection of steamer "Bertha" . . . . .	10 00
For inspection of steamer "Frolic" . . . . .	5 00
For inspection of steamer "Graphite" . . . . .	7 50
For inspection of steamer "Naomi" . . . . .	5 00
For inspection of steamer "Maude" . . . . .	5 00
For inspection of steamer "Elf" . . . . .	5 00
For inspection of steamer "Marietta" . . . . .	5 00
For inspection of steamer "Topsey" . . . . .	7 50
For inspection of steamer "Evelyn" . . . . .	12 50
For inspection of steamer "M. P. Brown" . . . . .	12 50
For inspection of steamer "Minnonah" . . . . .	5 00
For inspection of steamer "Lamont" . . . . .	5 00
For inspection of steamer "Mecca" . . . . .	5 00
For inspection of steamer "Beatrice" . . . . .	5 00

For inspection of steamer "Janet" .....	\$5 00
For inspection of steamer "Flyer" . . . . .	5 00
For inspection of steamer "The Queen" . . . . .	5 00
For inspection of steamer "Linda" . . . . .	5 00
For inspection of steamer "Clyde" . . . . .	5 00
For inspection of steamer "Olive" . . . . .	5 00
For inspection of steamer "Kanaughta" . . . . .	5 00
For inspection of steamer "Clarmont" . . . . .	5 00
For inspection of steamer "Nokomis" . . . . .	12 50
For inspection of steamer "Bertha" . . . . .	7 50
For inspection of steamer "Big Moose" .....	10 00
For inspection of steamer "Lake View" .....	5 00
For inspection of steamer "Mystic" . . . . .	5 00
For inspection of steamer "Eagle" . . . . .	5 00
For inspection of steamer "Alice" . . . . .	5 00
For inspection of steamer "Mermaid" .....	5 00
For inspection of steamer "Foxhall" . . . . .	5 00
For inspection of steamer "Stella Maria" . . . . .	5 00
For inspection of steamer "Oreole" . . . . .	5 00
For inspection of steamer "Waubek" . . . . .	5 00
For inspection of steamer "Saranac" . . . . .	10 00
For inspection of steamer "Loon" . . . . .	10 00
For inspection of steamer "Kwasind" . . . . .	5 00
For inspection of steamer "Indian Maid" .....	7 50
For inspection of steamer "La Mascot" .....	5 00
For inspection of steamer "Ampersand" . . . . .	5 00
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From M. Murray, for original license.....	5 00
From W. H. Howcroft, for original license.....	5 00
From H. L. Duffy, for original license.....	5 00
From P. McKenzie, for original license.....	5 00
From J. J. Merriman, for original license.....	5 00
From W. S. Annis, for original license.....	5 00
From J. S. Brown, for original license.....	5 00
From William Herron, for renewal of license.....	3 00
From D. P. Benson, for original license.....	5 00
From F. McHaw, for original license.....	5 00
From Paul Merrill, for renewal of license.....	3 00
From Fred Tuttle, for renewal of license.....	3 00
From Reuben Mick, for renewal of license.....	3 00
From R. Bennett, for renewal of license.....	3 00
From Geo. Z. Osborne, for renewal of license.....	3 00
From J. O. A. Bryne, for original license.....	5 00
From E. J. Fowler, for renewal of license.....	3 00
From Robert Hannah, for renewal of license.....	3 00
From A. N. Hammond, for renewal of license.....	3 00
From W. Faulkner, for renewal of license.....	3 00
From Ray Gaylord, for original license.....	5 00
From John Mott, for original license.....	5 00
From A. A. Rarick, for renewal of license.....	3 00
From Henry Hart, for renewal of license.....	3 00
From Fred Trotter, for renewal of license.....	3 00
From J. H. Wellington, for renewal of license.....	3 00
From E. A. Kenwell, for renewal of license.....	3 00
From E. E. Kellogg, for renewal of license.....	3 00
From F. D. Shaper, for renewal of license.....	3 00
From D. R. Ernest, for renewal of license.....	3 00
From P. A. Young, for renewal of license.....	3 00
From G. B. Payne, for renewal of license.....	3 00
From D. A. Payne, for original license.....	5 00
From H. J. Abbott, for renewal of license.....	3 00
From M. Callahan, for renewal of license.....	3 00

From G. F. Williams, for renewal of license.....	\$3 00
From John Rivett, for renewal of license.....	3 00
From E. B. Barrett, for renewal of license.....	3 00
From A. W. Radel, for renewal of license.....	3 00
From Chas. A. Cooley, for renewal of license.....	3 00
From T. S. Ervin, for renewal of license.....	3 00
From T. S. Ervin, for renewal of license.....	3 00
From Philo Pool, for renewal of license.....	3 00
From W. H. Johnson, for renewal of license.....	3 00
From Hiram Bargy, for renewal of license.....	3 00
From R. G. Crockett, for renewal of license.....	3 00
From Chas. M. Higgs, for original license.....	5 00
From J. S. Alexander, for renewal of license.....	3 00
From Ernest Cool, for original license.....	5 00
From H. G. Crownhart, for original license.....	5 00
From C. L. Bloss, for renewal of license.....	3 00
From F. H. Nuss, for renewal of license.....	3 00
From Isaac Devoe, for renewal of license.....	3 00
From Ed. Waddell, for renewal of license.....	3 00
From C. B. Strain, for renewal of license.....	3 00
From H. Van Wagener, for renewal of license.....	3 00
From A. D. Annis, for renewal of license.....	3 00
From J. C. Moss, for original license.....	5 00
From Henry Deo, for renewal of license.....	3 00
From W. L. Page, for renewal of license.....	3 00
From M. S. Kelsey, for renewal of license.....	3 00
From R. F. Cooper, for original license.....	5 00
From C. C. Strickland, for renewal of license.....	3 00
From John Waugh, for renewal of license.....	3 00
From C. S. Burleigh, for original license.....	5 00
From M. Babcock, for renewal of license.....	3 00
From Oliver Strong, for renewal of license.....	3 00
From Albert Perkins, for renewal of license.....	3 00
From Harry Stevens, for original license.....	5 00
From William Eaker, for original license.....	5 00
From Ed. Heagle, for original license.....	5 00
From A. Heagle, for original license.....	5 00
From Chas. Heagle, for original license.....	5 00

From S. Halstead, for renewal of license.....	\$3 00
From Jennie Halstead, for renewal of license.....	3 00
From S. Halstead, for renewal of license.....	3 00
From D. Chapman, for renewal of license.....	3 00
From D. Chapman, for renewal of license.....	3 00
From J. Devendorf, for renewal of license.....	3 00
From J. P. Conklin, for renewal of license.....	3 00
From William Pickert, for renewal of license.....	3 00
From Fred Folts, for renewal of license.....	3 00
From G. H. Sherman, for original license.....	5 00
From L. F. Alvord, for renewal of license.....	3 00
From L. H. Chapman, for renewal of license.....	3 00
From L. H. Chapman, for renewal of license.....	3 00
From L. L. Rosa, for renewal of license.....	3 00
From Dyer Royer, for renewal of license.....	3 00
From F. A. Richman, for renewal of license.....	3 00
From Ezra Bishop, for renewal of license.....	3 00
From C. H. McLean, for renewal of license.....	3 00
From C. S. Cooley, for renewal of license.....	3 00
From F. R. Williams, for original license.....	5 00
From E. W. Cole, for renewal of license.....	3 00
From A. C. Murdock, for renewal of license.....	3 00

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\$3,830 00

The above amount of money has been deposited with the State Treasurer, and can be found in Statement No. 9.

### SUPERINTENDENTS OF PUBLIC WORKS.

SUPERINTENDENTS.	Residences.	Appointed.
Benjamin S. W. Clark.....	Sing Sing.....	Jan. 30, 1878
Silas B. Dutcher.....	Brooklyn.....	Jan. 16, 1880
James Shanahan.....	Tribes Hill.....	Jan. 16, 1883
Edward Hannan.....	Troy.....	Dec. 16, 1889
George W. Aldridge.....	Rochester.....	Jan. 2, 1895
John N. Partridge.....	Brooklyn.....	Jan. 16, 1899
Charles S. Boyd.....	New York.....	Dec. 20, 1901
N. V. V. Franchot.....	Olean.....	Jan. 4, 1905
Frederick C. Stevens.....	Attica.....	Jan. 14, 1907

### DEPUTY SUPERINTENDENTS.

Patrick J. McWeeney.....	Herkimer.....	Oct. 6, 1896
Elton H. Hooker.....	New York.....	Feb. 1, 1899
Winslow M. Mead.....	Rochester.....	Aug. 25, 1901

## ASSISTANT SUPERINTENDENTS.

Eastern Division.....David H. Lewis, Tribes Hill  
 Middle Division.....Chas. C. Barrett, Rochester  
 Western Division.....Oscar H. Peacock, Rochester

ROSTER OF EMPLOYEES IN THE OFFICE OF SUPER-  
INTENDENT OF PUBLIC WORKS.

Financial Clerk..... P. J. McWeeney  
 Assistant Financial Clerk.....Edward L. Walsh  
 Clerk of Statistics.....John E. Winne  
 Stenographer.....Alfred M. O'Neill  
 Stenographer.....Jessie E. Holmes  
 Index Clerk.....F. S. Harder  
 Special Agent.....D. D. N. Marvin  
 Messenger .....Frank Langwig

BOUNDARIES OF DIVISIONS AND SECTIONS OF THE  
CANALS.

The following are the boundaries of the divisions of the canals as fixed by the Canal Board, August 16, 1900:

## EASTERN DIVISION.

Erie canal.—From the south end of the Albany basin to the easterly line of Oneida county; Champlain canal, and their tributary feeders.

## MIDDLE DIVISION.

Erie canal.—From the easterly line of Oneida county to the easterly line of Wayne county; Black river canal; Oswego canal; Cayuga and Seneca canal, and their tributary feeders.

## WESTERN DIVISION.

Erie canal.—From the easterly line of Wayne county through the city of Buffalo, including its tributary feeders.

The boundaries of the sections of the canals have been fixed as given below:

## ERIE CANAL.

Section 1. Erie canal, from the south end of the Albany basin to the west end of lower Mohawk aqueduct, including Watervliet basin, and the Watervliet and Port Schuyler sidecuts; also the Champlain canal from its junction with the Erie canal to a point 200 feet north of the Cohoes guard-lock.

Section 2. Erie canal, from west end of the lower Mohawk aqueduct to the head of lock 27.

Section 3. Erie canal, from the head of lock 27 to the head of lock 34.

Section 4. Erie canal, from the head of lock 34 to the easterly line of Oneida county.

Section 5. Erie canal, from the easterly line of Oneida county to the westerly side of Peterboro street bridge in the village of Canastota.

Section 6. Erie canal, from the westerly side of Peterboro street bridge in the village of Canastota to and including the Camillus feeder. Also that portion of the Oswego canal from its junction with the Erie canal in the city of Syracuse to and including lock No. 4 known as Mud lock, on the Liverpool level.

Section 7. Erie canal from the westerly side of Camillus feeder to the easterly line of Wayne county.

Section 8. Erie canal, from the easterly to the westerly line of Wayne county.

Section 9. Erie canal, from the westerly line of Wayne county to the westerly line of Monroe county.

Section 10. Erie canal, from the westerly line of Monroe county to the head of the guard-lock west of Lockport.

Section 11. Erie canal, from the head of the guard-lock west of Lockport, through the city of Buffalo, including Black Rock harbor, Erie and Ohio basins and the Clark and Skinner canal.

## CHAMPLAIN CANAL.

Section 1. Champlain canal, from a point 200 feet north of Cohoes guard-lock to the foot of lock 11, including the Troy slip-lock and dam and the pond above.



Section 2. Champlain canal, from the foot of lock 11 to the north side of waste-weir at Dunham's basin; also, Glens Falls feeder, the feeder dam and pond above.

Section 3. Champlain canal, from the north side of the waste-weir at Dunham's basin to Lake Champlain.

### BLACK RIVER CANAL.

Section 1. Black River canal, from the junction of the Black River canal with the Erie canal to the foot of lock 71, at Boonville; the feeder from Boonville to Forestport; the Black river above the dam at Forestport, including the dam; also all the reservoirs and feeders tributary to the canal and feeder as described above.

Section 2. Black River canal, from the foot of lock 71, at Boonville, to Black River, at Lyons Falls; the Black river improvement from Lyons Falls to Carthage, including the dam; also Moose river improvement.

### OSWEGO CANAL.

Oswego canal from lock No. 4 known as Mud lock through Oswego, including the Seneca river towing path, the Baldwinsville canal and the Oneida River improvement.

### CAYUGA AND SENECA CANAL.

Cayuga and Seneca Sections.—Cayuga and Seneca canal, from Montezuma to Geneva, with spur from mud-lock to Cayuga lake.

# EASTERN DIVISION.

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## REPORT OF THE ASSISTANT SUPERINTENDENT OF PUBLIC WORKS.

OFFICE OF THE  
ASSISTANT SUPERINTENDENT OF PUBLIC WORKS,  
EASTERN DIVISION OF THE CANALS,

ALBANY, N. Y., *December 31, 1908.*

Hon. F. C. STEVENS, *Superintendent of Public Works:*

Dear Sir.— I herewith submit my annual report for the fiscal year ended September 30, 1908, for the Eastern Division of the canals.

This division comprises that portion of the Erie canal extending from:

Albany to east line of Oneida county.....	106.24
Albany basin (Laws of 1849).....	.77
Port Schuyler and West Troy side-cuts.....	.35
Mohawk feeder (Little Falls).....	.50

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107.86

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Champlain canal and Waterford side-cut.....	66.00
Pond above Troy dam.....	3.00
Glens Falls feeder and pond above.....	12.00

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81.00

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Total Erie and Champlain canals.....	188.86
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Navigation opened on the Erie canal at noon, May 5th and closed at midnight, November 30th.

The Champlain canal opened at noon, May 15th and closed at midnight, November 15th.

There were no delays to navigation on the Erie canal with the exception of twelve hours on October 15th on the Mindenville level west of lock No. 34, said delay being caused by the giving away of a temporary dike placed by the Barge canal contractors, O'Brien & Houlihan Contracting Company, on the towing-path side of the canal. The repairs were made by the contractor's forces under my personal supervision, the contractors lending every possible aid that the breach might be quickly closed.

On May 15th, while the levels were being filled for the 1908 season, a serious break occurred under the splay wall of the Barge canal junction lock just completed by the Kinser Construction Company. Navigation was delayed four and one-half days, in which time a concrete bottom eight inches thick was placed from the head of said lock to the Fort Edward aqueduct, a distance of 200 feet.

On the morning of June 24th, a serious leak developed under the foundation of west wall of lock No. 8, Glens Falls feeder. The water was immediately drawn on short level when it was found that a twelve-foot section under the lock wall (soil under foundation of these locks being sand), was seriously undermined. Repairs of a permanent nature were made, the work being progressed continuously until the damaged lock wall had been made good. Delay to navigation on the feeder was forty-eight hours.

On the morning of August 22d a bad leak was discovered through the high bank at bridge No. 6, Glens Falls feeder. By promptly drawing the water off that level a break of very large proportions was undoubtedly avoided as the towing-path at this location is some thirty feet high and composed entirely of sand. The work of repairs, which consisted of the building and filling with stone, of a timber crib 125 feet long and 6 feet high; also the driving of section of Wakefield piling, was promptly done. Navigation on the feeder was delayed two days.

Owing to the extraordinarily low water that prevailed in the Hudson river this season, it was found impossible to keep the

required depth of water on all levels of the Champlain canal and not interfere with navigation on the Glens Falls feeder. Therefore, in order that there might be as little interruption as possible to navigation on the Champlain canal, it was found necessary from August 8th to September 28th to lock all feeder boats bound up or down the feeder after 6 p. m. each day and continue such locking until the following morning, if necessary. This plan, which the feeder boatmen knew was absolutely necessary, worked well and gave no dissatisfaction.

The apron of the timber dam across the Hudson river at the head of the Glens Falls feeder is in such condition that considerable repairs will be required the coming season. Such repairs when made will have a great tendency to shut off numerous leaks through and under the dam; and the filling of cribs in apron with stone, which will require perhaps 1,500 cubic yards, will be a benefit in the way of adding greater strength and resistance to the dam proper.

Other dams on this division are in good condition with the exception of Cohoes dam, the concrete apron of which should be thoroughly overhauled the coming season.

The side walls and bottom of Shermantown basin, Glens Falls feeder, should be concreted to prevent considerable leakage through the towing-path and the bottom of the canal which is seamy rock in this vicinity. With this improvement made to the Shermantown basin, the betterment work started several years ago of concreting the side walls and bottom of feeder over the section where loss of water had always been great, will have been completed.

All weeds and brush on the entire division were cut and burned.

All bridges, lock-houses, platform railings, balance beams, lock snubbing posts and iron work of waste weirs and spillways on this division were painted during the season.

About nine miles of ditching was done on this division at various points where most needed.

About forty-five miles of towing-path was scraped and cross-ditched, and about twenty miles raised and improved with gravel.

About six and one-half miles of towing-path was raised with crushed stone (procured from the State crushing plant east of Fort Hunter). In doing this work the broken stone was carefully top-dressed and rolled in a very thorough manner with a five-ton roller. I believe the final result where this macadam towing-path has been constructed will prove very satisfactory.

For the protection of the towing-path and the weakened berme banks, approximately three miles of timber docking ranging from one to six sticks high was constructed at various points on this division where necessary.

One new gravel scow was built at the Cohoes State shop.

Repairs were made to the various State shops on the division, including the placing of new roof on the shops at Mohawk and Fultonville, also the installation of a system of electric lighting at the Cohoes State shop.

An electric lock signal system for the benefit of the boatmen has been placed above and below the different locks on the Erie canal on this division where necessary, in order that drivers may signal to lock tenders in advance of the approach of boats. The installation of this system I believe is appreciated by boatmen generally.

Dredges Nos. 1 and 3 and the tugs B. B. Odell, Jr., and George W. Aldridge were employed at various points on this division during the first three months of navigation. Dredges Nos. 1 and 3 and the tug B. B. Odell, Jr., were employed during the last four months of navigation between the upper and lower side-cut locks at Watervliet where the prism of canal had become badly congested. Great improvement was made and I would advise that dredging operations at this point be carried on during the coming season in order that the betterment may be completed.

Dredge No. 2, together with house-boat and one mud scow were towed to Utica by tug George W. Aldridge and turned over to the Superintendent of the Middle Division.

The stone crushing plant, which by your direction was installed at the State quarry one mile east of Fort Hunter was operated practically during the entire season of navigation, the output being used for the betterment of the towing-path.

Owing to the locations where gravel can be secured on several of the sections of this division making long hauls necessary, I find that towing-path improvements can be made with crushed stone from the State crushing plant at as low a cost as with gravel, and I believe that the wearing quality of the towing-path improved with crushed stone will exceed at least 50 per cent. the wearing quality of towing-path similarly treated with the same amount of gravel.

## GENERAL IMPROVEMENTS ON THE EASTERN DIVISION OF THE CANALS FROM JANUARY 1, 1908, TO JANUARY 1, 1909.

### *Section 1, Erie Canal.*

The pier walls of lock No. 2 repointed and grouted.

Docking repaired at Watervliet.

East wall of lock No. 8 trimmed back.

Docking rebuilt at upper ends of locks Nos. 10 and 11.

Lock No. 14 trimmed back.

New concrete bottom in lock No. 16.

East wall of lock No. 18 and vertical wall above for a distance of 200 lineal feet, repointed and grouted.

Sides of lower Mohawk aqueduct calked.

East wall of lock No. 1, Champlain canal, repointed and grouted.

New tumble gate and platform at lock No. 2, Champlain canal.

The vertical walls at various places between lock No. 3 and lower Mohawk aqueduct rebuilt.

Docking repaired between bridges Nos. 3 and 5; bridge No. 19 and lock No. 3; at various places between locks Nos. 3 and 18; between lock No. 18 and waste weir No. 4, and at upper wide waters.

The towing-path was scraped, graveled and repaired between locks Nos. 1 and 2, at various places between lock No. 2 and

lower side cut, Watervliet; at head of Ontario street, Cohoes; south of bridge No. 34, and from locks Nos. 3 to 18.

Culvert No. 7 repaired.

Embankment between locks Nos. 14 and 15 repaired.

Retaining wall at lock No. 16 repaired.

Ice fenders on lower Mohawk aqueduct renewed.

Bulkheads of locks Nos. 9 to 16 filled with stone.

### *Section 2, Erie Canal.*

Bridge across lower end of Rexford Flats feeder rebuilt.

New gates and mitre sill in lock No. 22.

Bridge No. 56 rebuilt.

Approach to College street bridge, Schenectady, repaired.

New vertical timber docking west of bridge No. 62.

Bridge No. 67 rebuilt.

Cleaning out prism of canal east of lock No. 26.

Slope wall between bridge No. 71 and lock No. 26 relayed.

Docking repaired west of bridge No. 35 and east of bridge No. 36.

Vertical plank docking opposite General Electric Company's power house, Schenectady.

Berne bank cleared and raised between bridges Nos. 41 and 43; between culvert No. 20 and bridge No. 46, and east and west of bridge No. 75.

The towing-path scraped and graveled and repaired east of lock No. 19; between bridges Nos. 51 and 54; west of bridge No. 54; west of bridge No. 73 and east of bridge No. 75.

Ice fenders on upper Mohawk aqueduct renewed.

Basin above Baffle dam at Pattersonville aqueduct cleaned out.

Berne abutment of bridge No. 75 tied back.

### *Section 3, Erie Canal.*

Repairing bottom and slope walls of canal west of lock No. 27.

Bridge No. 79 rebuilt.

Repairing culvert west of lock No. 27.

Bottom of lock No. 28 concreted.

Slope walls between locks Nos. 28 and 29 refilled with stone at various places.

New bulkhead at lower end of Schoharie creek feeder.

Vertical wall east of lock No. 30 rebuilt.

The abutments and piers of aqueducts Nos. 6, 7 and 8 repointed and grouted and aqueduct No. 6 repaired.

New vertical timber docking opposite Big Nose.

Bridge No. 113 rebuilt.

Lock No. 32 trimmed back.

Fender piles at upper end of lock No. 33 repaired.

Culverts Nos. 38 and 43 cleaned out.

Towing-path scraped, graveled and repaired east and west of culvert No. 41, east of lock No. 28 to west of bridge No. 86; between bridge No. 99 and aqueduct No. 8; west end of Big Nose to bridge No. 106; east of lock No. 32 to Canajoharie and between locks Nos. 32 and 33.

Repairing berme bank east of culvert No. 45; west of bridge No. 83; east of bridge No. 99; east of bridge No. 111 and east of Fink's basin.

Docking repaired at east end of Big Nose and at Stone quarry near Fort Hunter.

#### *Section 4, Erie Canal.*

Two new gates at lock No. 35.

Bridge No. 132 rebuilt.

Bottoming out Little Falls feeder.

Two new gates at lock No. 38.

New docking at head of lock No. 39.

Piers and fender piles at lock No. 40 repaired.

Two new gates at lock No. 42.

New concrete bottom in lock No. 42.

Two new gates and piers of lock No. 43 repaired.

Fender piles at lock No. 44 repaired.

Ilion aqueduct repointed and grouted.

Fender piles at lock No. 45 repaired.

Towing-path scraped, graveled and repaired between locks Nos. 39 and 40; between locks Nos. 40 and 41; between locks



Nos. 42 and 43; between locks Nos. 43 and 45; west of lock No. 45; between bridges Nos. 162 and 164 and east of bridge No. 165.

Bridge No. 134 rebuilt.

Repairing berme bank east of bridge No. 142.

Channel below Ilion aqueduct cleaned out.

### *Section 1, Champlain Canal.*

Four new gates at Waterford side cut locks, also masonry repointed and grouted in several places.

Locks Nos. 5, 6, 7 and 8 repointed and grouted.

The berme abutments to bridges Nos. 38 and 39 rebuilt.

Berme and towing-path vertical walls over culvert No. 7 were repointed.

Repaired Bemis Heights bridge.

Repaired State dams at Troy and Cohoes.

Docking repaired south of waste weir No. 5; north of lock No. 9; between bridges Nos. 35 and 36; south of bridge No. 38; between bridges Nos. 48 and 49; south of bridge No. 57; south of bridge No. 59; south of bridge No. 61 and north of lock No. 10.

Towing-path bank repaired north of bridge No. 55 and south of bridge No. 57.

### *Section 2, Champlain Canal.*

Vertical wall on berme side of canal between bridges Nos. 89 and 90 repaired and repointed.

Repaired abutment of bridge No. 82.

Rebuilt abutment for bridge No. 91.

Vertical wall on towing-path side west of bridge No. 94 repointed.

Bottom of lock No. 12 concreted and two new gates put in. Bridge No. 95 rebuilt.

Lock No. 15 trimmed back.

Two new gates in lock No. 3, Glens Falls feeder.

Piers and sluice at locks Nos. 2 and 3, Glens Falls feeder were rebuilt.

New concrete cut-off wall at upper end of lock No. 4, Glens Falls feeder.

Bottom of lock No. 6, Glens Falls feeder, concreted.

Break repaired at lock No. 8, Glens Falls feeder.

Two new gates at lock No. 10, Glens Falls feeder.

Two new gates at lock No. 12, Glens Falls feeder.

Repairing vertical wall near Glen street bridge, Glens Falls.

New sluiceway at lock No. 12, Glens Falls feeder.

Bridge No. 2 at foot of lock No. 13, Glens Falls feeder, was rebuilt.

Concreting bottom and sides of the Glens Falls feeder south of bridge No. 8 for a distance of 600 feet.

Grouting and repointing masonry at lock No. 14, Glens Falls feeder.

Docking repaired north of lock No. 12; between locks Nos. 12 and 14; north of bridge No. 84 and on the Glens Falls feeder between locks Nos. 5 and 6.

Glens Falls feeder dam repaired.

The towing-path scraped, graveled and repaired from foot of Glens Falls feeder to Dunhams basin, and north of bridge No. 6, Glens Falls feeder.

Concrete coping on locks Nos. 6, 7, 8, 9 and 10, Glens Falls feeder.

Rebuilt retaining wall at foot of waste weir No. 1, Glens Falls feeder.

### *Section 3, Champlain Canal.*

Four new gates at lock No. 16, and masonry grouted and repointed.

Abutment to bridge No. 113 repaired.

The towing-path scraped, graveled and repaired between Dunhams basin and Woodchuck Bend, and between locks Nos. 20 and 21.

Docking repaired north and south of Woodchuck Bend; south of bridge No. 103; south of bridge No. 104 and at various places between bridges Nos. 123 and 131.

*Special Appropriations.*

Repairing bridge over Minisceongo creek.

Improving Steele creek in the village of Ilion.

Improving roads on St. Regis Indian reservation.

During the past year there has been made at and furnished from the State shop, at Cohoes, and distributed to the different sections, manufactured materials representing money in value as follows:

*Section 1, Erie Canal.*

Lock gates, 15 upper and 8 lower.....	\$2,690 00
Four toe posts for lower gates .....	96 00
Lock gate valves (43).....	387 00
Pike hooks and ice chisels with ferrules.....	31 10
Two bales of oakum.....	9 00
Red and white paint.....	66 25
New grout pump, complete.....	25 00
Five lock rakes.....	10 00
Rope .....	33 80
Blacksmith, carpenters and carpenter helper.....	268 66
Steel chisels .....	6 40
Wrought iron of all kinds, 18,151 lbs.....	1,043 96
Cast iron work, all kinds, 5,719 lbs.....	228 76
Lumber and timber, all kinds, 25,078 feet.....	938 05
Wooden pins for lock gates (500).....	10 00
Total . . . . .	<hr/> \$5,843 98 <hr/>

*Section 2, Erie Canal.*

Wrought iron work of all kinds, 17,081 lbs.....	\$987 86
Cast iron work of all kinds, 6,106 lbs.....	244 24
Steel drills .....	90

Lumber and timber of all kinds, 764 feet.....	\$34 38
Lock gate valves (21).....	189 00
Toe posts, 1 upper and 1 lower.....	44 00
Portland cement, 20 barrels.....	28 00
Pike hooks and ferrules (20).....	8 00
Wooden lock gate pins (50).....	1 00
Wire cable.....	15 00
Blacksmith and carpenter work.....	23 10
Total .....	<u>\$1,575 48</u>

*Section 3, Erie Canal.*

Wrought iron work of all kinds, 5,206 lbs.....	\$282 30
Cast iron work of all kinds, 1,600 lbs.....	64 00
White oak, 1,960 feet.....	83 20
Lock gate valves (17).....	153 00
Two wrenches .....	2 00
Blacksmith work and labor.....	31 60
Steel drills .....	1 00
Lead for cables on lift bridge.....	4 00
Total .....	<u>\$621 10</u>

*Section 4, Erie Canal.*

Wrought iron work of all kinds, 4,683 lbs.....	\$275 48
Cast iron work of all kinds, 2,804 lbs.....	122 64
Toe posts, 4 upper and 1 lower.....	104 00
Lock gates, 8 lower.....	1,040 00
Lock gate valves (16).....	144 00
Splices for heel post (3).....	30 00
Cluth collars (4).....	4 00
Packing for grout pump.....	2 00
Total .....	<u>\$1,722 12</u>

*Section 1, Champlain Canal.*

Lock gates, 2 lower.....	\$260 00
Lock gate valves (4).....	36 00
Pike hooks and ferrules (20).....	8 00
One and three-quarter inch turnbuckles (8).....	10 40
One inch turnbuckles (2).....	2 00
Portland cement, 3 barrels.....	4 20
Blacksmith and carpenter work.....	108 00
Lumber and timber, all kinds, 6,176 feet.....	253 44
Wrought iron work of all kinds, 7,221 lbs.....	371 24
Cast iron work of all kinds, 9,720 lbs.....	388 80
Steel drill . . . . .	60
Rope . . . . .	5 20
Total . . . . .	<u>\$1,447 88</u>

*Section 2, Champlain Canal.*

Lock gates, 2 upper and 2 lower.....	\$480 00
Toe posts for lower gates (2).....	48 00
Lock gate valves (8).....	72 00
Labor of all kinds.....	30 25
Cast iron of all kinds, 1,874 lbs.....	85 50
Wrought iron of all kinds, 3,860 lbs.....	196 06
Total . . . . .	<u>\$911 81</u>

*Section 3, Champlain Canal.*

Lock gates, 2 upper and 2 lower.....	\$480 00
Lock gate valves (4).....	36 00
Band wheels (4).....	3 75
One ice breaker.....	550 00
Wrought iron of all kinds, 3,821 lbs.....	206 26
Cast iron of all kinds, 550 lbs.....	22 00
Total . . . . .	<u>\$1,298 01</u>

*Tug George W. Aldridge.*

Rope, 312 lbs.....	\$41 73
Wrought iron work of all kinds, 42 lbs.....	2 52
Blacksmith and carpenter work.....	72 55
Pike hook and pole.....	1 00
Seven brooms .....	1 75
Boat fenders (12).....	18 00
Oil of all kinds.....	7 25
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Total . . . . .	\$144 80
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*Tug B. B. Odell, Jr.*

Rope, 175 lbs.....	\$22 75
Wrought iron work of all kinds, 25 lbs.....	1 50
Blacksmith and carpenter work.....	15 45
Eleven brooms .....	2 75
One wrench .....	50
Red paint .....	5 00
Linseed oil .....	5 00
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Total . . . . .	\$52 95
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*Dredge No. 1.*

Rope, 372 pounds.....	\$48 36
Wrought iron work of all kinds, 1,009 pounds....	60 54
Oil of all kinds.....	6 00
Paint .....	1 75
Blacksmith and carpenter work.....	67 70
Cold chisels .....	1 40
Pails, three .....	1 50
Oak timber, 264 feet.....	11 88
Ice chest, complete.....	25 00
<hr/>	
Total . . . . .	\$224 13
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*Dredge No. 2.*

Rope, 200 pounds., .....	\$26 00
Labor and team work.....	8 50
Oil.....	50
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Total .....	\$35 00
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*Dredge No. 3.*

Wrought iron work of all kinds, 1,102 lbs.....	\$66 12
Rope, 350 lbs.....	45 50
Cold chisels .....	1 60
Galvanized pails, five.....	2 50
Four brooms .....	1 00
Georgia pine lumber, 532 feet.....	21 28
Oil of all kinds.....	4 45
Paint .....	20 00
Blacksmith and carpenter work.....	93 15
Wooden shovels for mud scows.....	4 00
Cable chain, 7/16-inch.....	1 00
Two 10-inch 2-sheave tackle blocks.....	4 00
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Total .....	\$264 10
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*Stone Crushing Plant.*

Wrought iron work of all kinds, 1,132 lbs.....	\$67 92
Two steel skips.....	110 00
Cold chisels .....	1 00
Lumber, oak and maple.....	17 34
Carpenter work .....	40 00
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Total .....	\$236 26
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*State Boat "Inspector."*

Oil .....	\$4 00
Carpenter work .....	18 50
Brooms, five, and waste, 10 lbs.....	2 25

*Steam Pump Boat.*

Oil .....	\$3 00
Labor .....	64 80
Paint .....	6 25
Brooms, three, and two galvanized iron pails.....	1 75
Blankets .....	4 50

Total .....	\$80 30
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*Eastern Division.*

New gravel scow, complete.....	\$3,400 00
Concrete wall at north end of lumber shed, 33 cubic yards .....	221 00
Total .....	\$3,621 00

The following are the amounts distributed on the Eastern Division from the Cohoes State shop, Cohoes, N. Y.:

Section 1, Erie canal .....	\$5,843 98
Section 2, Erie canal .....	1,575 48
Section 3, Erie canal .....	621 10
Section 4, Erie canal .....	1,722 12
Section 1, Champlain canal .....	1,447 88
Section 2, Champlain canal .....	911 81
Section 3, Champlain canal .....	1,298 01
Tug George W. Aldridge.....	144 80
Tug B. B. Odell, Jr.....	52 95
Dredge No. 1 .....	224 13
Dredge No. 2 .....	35 00



Dredge No. 3.....	\$264 10
Stone crushing plant.....	236 26
Boat "Inspector" .....	24 75
Steam pump boat.....	80 30
Eastern Division .....	3,621 00
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Total .....	\$18,103 67
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Financial tables showing ordinary expenditures made from October 1, 1907 to September 30, 1908, are herewith attached.

DAVID H. LEWIS,  
*Assistant Superintendent.*

DETAILED STATEMENT of expenditures on the Eastern Division of the canals, by David H. Lewis, Assistant Superintendent of Public Works, from October 1, 1907, to September 30, 1908, both inclusive.

FOR WHAT EXPENDED.	Office.	Division.	ERIE CANAL.				CHAMPLAIN CANAL.		
			Section 1.	Section 2.	Section 3.	Section 4.	Section 1.	Section 2.	Section 3.
Blacksmithing.		\$9 50	\$19 00	\$54 77	\$10 65	\$150 78	\$3 50	\$42 27	\$18 18
Burying dead animals.			263 39	10 00					
Clerk, salary of.	\$1,600 00		812 59			4 40		328 68	14 35
Cement.		1,328 23		217 73	240 87	76 67	951 42	325 02	240 23
Coal, all uses.									21 45
Electric lighting.			444 59	264 02	309 43	259 34	594 68	619 25	178 03
Hardware, iron castings, etc.		3,939 87							
Lumber and timber (Cohoos shop).		4,250 16	4,727 66	5,729 20	3,506 06	730 83	2,630 17	2,116 57	1,445 08
Lumber and timber for sections.			13,280 70	10,498 95	21,042 04	15,543 24	2,415 17	6,272 75	1,171 78
Labor and team work.		11,704 07							
Labor, skilled (Cohoos shop).		12,428 31	3,795 14	295 40	487 29	57 11	1,674 17	380 81	766 77
Labor on tugs, dredges and scows.		3,285 04	113 59	24 78	61 11	38 48	38 63	56 76	19 95
Merchandise, general.		414 84	336 00	126 00	98 00	154 00	154 00	238 00	70 00
Oil for locks.			1,679 99	1,329 18	826 44	886 77	2,304 10	865 38	428 31
Paints, painting, oils, etc.		643 45							
Postage.	90 00								
Repairs to tugs, dredges and scows.		844 11	74 19		51 91	27 58	34 29	9 69	19 96
Rent of State shop, etc.									50 00
Rope, line, etc.		392 86	117 92	531 43	273 83	288 96	108 88	22 38	54 61
Supplies to tugs, dredges and scows.		34 80							
Stationery, printing, etc.		7 80	63 90	31 91	65 88	44 55	62		
Stenographer and typewriter.	1 55								
Sand, gravel and clay.	900 00								
Stone.		15 60	402 12		3 00	78 00	2 00	17 58	
Telephone and telegraph service.		19 60					681 25	291 21	
Transportation, freight and express.	569 00	299 03	48 79	207 24	151 68	65 22	75 81	67 70	89 95
Towing.		32 00		65 03	74 62	51 11	46 28	65 14	280 61
Total.	\$3,160 55	\$39,649 17	\$26,179 57	\$19,385 64	\$27,202 81	\$18,457 02	\$11,719 92	\$11,719 19	\$4,839 26
Grand total.									\$162,313 13

ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on section 1 of the Erie Canal, under the charge of George H. Whitney, superintendent of repairs, during the 346 days ended September 10, 1908.

STRUCTURES OR WORK, ETC.	Whole number on section.	Cost of repairs of old, etc.
Locks.....	24	\$802 10
Lock-gates.....	186	.....
Aqueducts.....	1	.....
Waste-weirs.....	7	.....
Culverts.....	16	.....
Weigh-locks.....	2	.....
Farm bridges (wood).....	6	.....
Farm bridges (iron).....	5	.....
Road bridges (wood).....	4	.....
Road bridges (iron).....	22	.....
Tow-path bridges (wood).....	2	.....
Tow-path bidges (iron).....	2	.....
State scows.....	2	.....
Ice breakers.....	1	.....
Under water excavators.....	2	.....
Lock-houses.....	6	.....
Work-shops.....	1	.....
Watch-houses.....	24	.....
Store-houses.....	2	.....
Timber-sheds.....	1	.....
Raising and repairing tow-path and berme bank, not including repairs to slope walls.....	.....	125 00
Cleaning out bottom of canal during spring repairs.....	.....	300 00
Dams (feet, 1,600).....	1	.....
Slope wall.....	.....	800 00
Docking.....	.....	260 37
Watching canal.....	.....	39 00
Disb. clerk.....	.....	75 00
Total.....	.....	\$2,401 47

*ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on the line of the canal under the charge of Jacob M. Grass, superintendent of repairs for section 1 of Erie canal during the 15 days ended September 30, 1908.*

STRUCTURES OR WORKS, ETC.	Whole number on section.
Locks.....	24
Lock-gates.....	186
Aqueducts.....	1
Waste-weirs.....	7
Culverts.....	16
Weigh-locks.....	2
Farm bridges (wood).....	6
Farm bridges (iron).....	5
Road bridges (wood).....	4
Road bridges (iron).....	22
Tow-path bridges (wood).....	2
Tow-path bridges (iron).....	2
State scows.....	2
Ice breakers.....	1
Under water excavators.....	2
Lock-houses.....	6
Work-shops.....	1
Watch-houses.....	24
Store-houses.....	2
Timber-sheds.....	1
Dams (feet, 1,600).....	1

### REPAIRS AND IMPROVEMENTS.

Repairs to locks have been made on this section where such repairs were required.

A large portion of the towing-path on the Nine Mile level has been graveled and graded,

The towing-path along sixteen locks has been graveled and graded.

The brush and weeds along the banks have been cut and burned during the season.

All bridges have been replanked and repaired whenever necessary.

New snubbing-posts have been placed where required.

A considerable amount of ditching has been done in section during the season.

Nearly 2,000 lineal feet of docking has been built through the sixteen locks.

There was no interruption to navigation through lack of water during season.

J. M. GRASS,  
Superintendent.

ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on the line of the canal under the charge of James Scanlon, superintendent of repairs for section 2 of Erie canal, during the 366 days ended September 30, 1908.

STRUCTURES OR WORKS, ETC.	Whole number on section.	Cost of repairs of old, etc.	Total new and old.
Locks.....	9	\$407 90	\$407 90
Lock-gates.....	74	.....	.....
Aqueducts.....	3	209 50	209 50
Waste-weirs.....	2	.....	.....
Culverts.....	18	.....	.....
Farm bridges (wood).....	14	.....	.....
Farm bridges (iron).....	1	.....	.....
Road bridges (wood).....	18	.....	.....
Road bridges (iron).....	10	.....	.....
Tow-path bridges (wood).....	1	.....	.....
Tow-path bridges (iron).....	1	.....	.....
State scows.....	3	94 13	94 13
Ice breakers.....	2	.....	.....
Lock-houses.....	3	.....	.....
Work-shops.....	1	.....	.....
Watch-houses.....	10	.....	.....
Store-houses.....	1	.....	.....
Watching Green street canal bridge.....	.....	40 00	40 00
Other works of consequence which do not come under any of the above heads, viz.:	.....	.....	.....
Watching State houses.....	.....	35 00	35 00
Bottoming out and repairing walls.....	.....	937 42	937 42
Publishing and filing abstract.....	.....	4 81	4 81
Disbursing clerk.....	.....	60 00	60 00
Single team.....	.....	25 00	25 00
Total.....	.....	\$1,813 76	\$1,813 76

## REPAIRS AND IMPROVEMENTS.

During the year Bridge No. 56 and Feeder bridge at Rexford Flats was replaced by a new structure. All bridges have been more or less repaired.

Considerable attention has been given to repairs and construction of docking, 1,500 lineal feet of new docking has been built on the seven mile level.

The weeds and brush have been cut for the entire length of section.

No breaks or serious leaks have occurred during the season, and navigation has not been interrupted.

Respectfully submitted,

JAMES SCANLON,

*Superintendent.*

*ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on section 3 of the Erie canal, under the charge of Oliver Hurst, superintendent of repairs, during the 366 days ended September 30, 1908.*

STRUCTURES OR WORKS, ETC.	Whole number on section.	Cost of repairs of old, etc.
Locks.....	7	\$323 25
Lock-gates.....	28	.....
Aqueducts.....	7	356 76
Waste-weirs.....	10	90 25
Culverts.....	30	.....
Farm bridges (wood).....	47	83 25
Lift bridges (iron).....	3	.....
Road bridges (iron).....	10	.....
State scows.....	5	60 00
Ice breakers.....	2	.....
Lock-houses.....	7	.....
Work-shops.....	1	.....
Watch-houses.....	1	.....
Store-houses.....	2	.....
Cleaning out bottom of canal during spring repairs.....	.....	253 25
Slope wall.....	.....	391 98
Disbursing clerk.....	.....	60 00
Single rig.....	.....	25 00
Shop watch.....	.....	32 00
Rebuilding coping at aqueduct No. 7....	.....	14 25
Total.....	.....	\$1,689 99

## REPAIRS AND IMPROVEMENTS.

All needed repairs have been made to the locks on this section. The weeds along the banks of the canal have been cut.

Bridges have been repaired by inserting new needle beams and replanked where necessary.

About 7,000 lineal feet of new docking has been built on the section, two sticks high.

The berme bank has been reinforced and strengthened where necessary, about 2,000 feet in all.

Five thousand feet of slope wall, on inner angle of the towing-path, has been repaired by the relaying of wash wall at point of water height and up.

All bridge approaches have been graveled, also under all bridges the towing-path has been raised.

About 5,000 feet of towing-path has been raised and graveled.

A new gravel pit has been opened above lock No. 33, also a new dock at this point has been built.

The Schoharie creek aqueduct and dam have been repaired.

The berme abutment at bridge No. 112, has been repaired by tying back in approach by cable, etc.

The water has been kept at a normal height during the whole season. There have been no delays to navigation.

OLIVER HURST,

*Superintendent.*

ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on section 4 of the Erie canal, under the charge of Charles Wallace, superintendent of repairs, during the 366 days ended September 30, 1908.

STRUCTURES OR WORKS, ETC.	Whole number on section.	Cost of repairs of old, etc.
Locks.....	11	\$460 75
Lock-gates.....	82	.....
Aqueducts.....	5	157 50
Waste-weirs.....	7	.....
Culverts.....	6	.....

ANNUAL REPORT, showing the name and number of structures or works on section 4 —(Continued).

STRUCTURES OR WORKS, ETC.	Whole number on section.	Cost of repairs of old, etc.
Farm bridges (wood).....	30	.....
Road bridges (wood).....	8	.....
Road bridges (iron).....	12	.....
State scows.....	4	.....
Ice breakers.....	2	.....
Lock-houses.....	4	.....
Work-shops.....	2	.....
Watch-houses.....	11	.....
Cleaning out bottom of canal during spring repairs.....		453 55
Slope and vertical wall.....		86 75
Repainting scows.....		60 00
Disbursing clerk, feeder tender and shop watchman.....		145 00
Single team going over section.....		25 00
Publishing extract of expenditures.....		5 10
Total.....		\$1,393 65

### REPAIRS AND IMPROVEMENTS.

All locks and bridges have been painted.

All weeds and brush have been cut along towing-path. Four miles of the towing-path has been graveled. Eighteen miles of the towing-path has been scraped and material brought from the rear to the front angle.

Cross-ditches have been cut where necessary.

Twenty-five hundred feet of the berme bank has been ripped between locks 35 and 41.

Bridge 137 has been rebuilt.

At no time has there been a scarcity of water.

CHARLES WALLACE,  
*Superintendent.*



ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on section 1 of Champlain canal, under charge of John Richmond, Superintendent of Repairs, during the 366 days ended September 30, 1908.

STRUCTURES OR WORKS, ETC.	Whole number on section.	Total cost of repairs, new and old.
Locks.....	11	.....
Lock-tending.....	.....	\$8,973 00
Dams.....	3	.....
Weigh lock tending.....	.....	934 84
Acqueduct.....	1	.....
Lock-gates.....	44	.....
Waste-weirs.....	10	.....
Culverts.....	7	.....
Weigh locks.....	1	.....
Tow-path bridge.....	1	.....
Farm bridges (wood).....	24	.....
Road bridges (wood).....	22	.....
Farm bridges (iron).....	3	.....
Road bridges (iron).....	16	.....
Waste-weir bridges.....	10	.....
Disbursing clerk.....	.....	510 00
Bank watch and horse.....	.....	524 99
Bridge-tenders.....	.....	901 44
Carpenters, etc.....	.....	2,508 87
State scows.....	3	.....
Collector's office.....	1	.....
Ice breakers.....	3	.....
Spillways.....	1	.....
Lock-houses.....	7	.....
Store-houses.....	1	.....
Single team.....	.....	320 00
Raising and repairing tow-path.....	.....	2,739 08
Cleaning prism canal.....	.....	674 50
Watching canal.....	.....	1,874 29
Publishing abstract.....	.....	30 00
Filing abstract.....	.....	2 17
Painting State scows.....	.....	63 00
Slope wall.....	.....	191 25
Total.....	.....	\$20,247 43

## REPAIRS AND IMPROVEMENTS.

*Locks.*

During spring repairs all locks were overhauled, connecting rods straightened, new bolts put in where needed, and minor repairs made to all locks on section.

*Bridges.*

During the season bridges all along section have been overhauled, new needle beams put in and approaches to several repaired and put in good condition.

*Docking.*

Old dock sticks were taken out and new ones put in at different points all along section.

*Feeders.*

During spring repairs all feeders were overhauled, repairs made where necessary and cleaned out.

*Waste Weirs.*

All waste weirs thoroughly overhauled, pointed and repaired where necessary and cleaned.

*Prism of Canal.*

During spring cleaning bars were removed at various places all along section and the prism put in good shape.

*State Scows.*

The "Timothy L. Woodruff," "H. O. Folger" and "Charles H. Sarles," were thoroughly overhauled, caulked and painted.

*Cutting Brush.*

During the season all weeds, brush, etc., were cut, piled and burned.

*Dredging.*

The State dredge was used to good advantage in cleaning out Guard Lock No. 4 and at different places along the section.

*Tow-Path.*

The tow-path has been kept in excellent condition by the State boat crews, rolling, scraping and strengthening the banks.

*Vertical Wall.*

Vertical and slope walls were repaired at different points all along the section.

JOHN RICHMOND,

*Superintendent.*

ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on section 2 of the Champlain canal, under the charge of Patrick O'Grady, superintendent of repairs, during the 366 days ended September 30, 1908.

STRUCTURES OR WORKS, ETC.	Whole number on section.	Cost of new structures.	Cost of repairs of old, etc.	Total new and old.
Locks.....	19	.....	\$856 31	\$856 31
Lock-tending (exclusive of oil).....	.....	.....	13,456 75	13,456 75
Lock-gates.....	64	.....	371 75	371 75
Aqueducts.....	3	.....	.....	.....
Waste-weirs.....	3	.....	43 50	43 50
Culverts.....	9	.....	.....	.....
Sluices.....	8	.....	184 75	184 75
Farm bridges (wood)....	11	.....	135 00	135 00
Road bridges (wood)....	27	.....	947 17	947 17
Tow-path bridges (wood)	5	.....	.....	.....
Foot bridges.....	21	\$34 50	.....	34 50
State scows.....	2	.....	50 00	50 00
Small boats.....	1	.....	.....	.....
Ice breakers.....	2	.....	.....	.....
Lock-houses.....	16	.....	.....	.....
Work-shops.....	1	.....	46 00	46 00
Watch-houses.....	1	.....	.....	.....
Timber-sheds.....	3	.....	.....	.....
Piling machines.....	1	.....	.....	.....
Raising and repairing tow-path and berme bank, not including repairs to slope walls..	.....	.....	3,427 69	3,427 69
Cleaning out bottom of canal during spring re- pairs.....	.....	.....	664 75	664 75
Dams (feet, 900).....	1	.....	115 00	115 00
Slope wall.....	.....	.....	774 16	774 16
Docking.....	.....	.....	593 60	593 60
Repairs of breaches.....	.....	.....	34 50	34 50
Watching canal.....	.....	.....	3,005 96	3,005 96
Other miscellaneous ex- penditures.....	.....	.....	543 23	543 23
Foreman.....	.....	.....	724 50	724 50
Disbursing clerk.....	.....	.....	510 00	510 00
Publishing.....	.....	.....	52 92	52 92
Total.....	.....	\$34 50	\$26,537 54	\$26,572 04

## REPAIRS AND IMPROVEMENTS.

During the season a new set of upper gates were placed in lock No. 10 and a new set of lower gates in lock No. 12 of the Glens Falls feeder. Two new balance beams were placed on the lower gates of lock No. 5, Glens Falls feeder, and also on lower gates of lock No. 12, Champlain canal.

The old plank bottom of lock No. 6, Glens Falls feeder was removed, and a new one of concrete was substituted. The sides of lock No. 15, Champlain canal were trimmed and repointed thus facilitating the entry and handling of transportation.

*Sluiceways.*

A new sluiceway was built around the "two combines," as also around lock No. 12, Glens Falls feeder, and all necessary repairs were made on other sluices.

*Bridges.*

Two new bridges, No. 2, Glens Falls feeder, and No. 95, Champlain canal, were built and put in place and all others on this section were painted and fully repaired.

New foot bridges have been placed as follows:

At lock Nos. 12 and 13, Glens Falls feeder. All others, and also all balance beams, have been repaired and repainted.

*Lock Houses.*

All lock houses have been repainted and necessary repairs have been made.

Navigation was delayed on this section of the Champlain canal four and one-half days by a break under the splay wall of the Barge canal junction lock at Fort Edward on May 15th. This lock was completed last spring by the Kinser Construction Company. Also four days on the Champlain canal by low water from August 31st to September 3d.

Navigation was delayed two days on the Glens Falls feeder by a leak at lock No. 8 which was discovered on June 24th; also two days by a bad leak in the high bank near bridge No. 6, Glens Falls feeder. This leak was of such a serious nature that

water had to be drawn from the level while repairs were being made. Navigation was stopped during the day time on the level from Glens Falls to Sandy Hill from August 8th to September 28th, in order to maintain navigation on the Champlain canal.

Glens Falls feeder dam leaks considerably and the apron is in bad condition in many places and should be thoroughly repaired the coming summer.

The work of concreting the bottom and sides of the Glens Falls feeder should be continued, and as there is a large amount of water leaking under the towing-path at the Shermantown basin in Glens Falls, I would suggest that the improvement be made at this point.

PATRICK O'GRADY,  
*Superintendent.*

*ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on section 3 of the Champlain canal, under the charge of George Neddo, superintendent of repairs, during the 366 days ended September 30, 1908.*

STRUCTURES OR WORKS,	Whole number on section.	Cost of new structures.	Cost of repairs of old, etc.	Total new and old.
Locks.....	8	.....	\$519 25	\$519 25
Lock-tending (exclusive of oil).....	.....	.....	5,847 82	5,847 82
Lock-gates.....	26	.....	22 00	22 00
Waste-weirs.....	8	.....	82 50	82 50
Culverts and tow-path walls.....	3	.....	578 00	578 00
Farm bridges (wood)....	16	.....	.....	.....
Farm bridges (iron)....	7	.....	.....	.....
Road bridges (wood)....	5	\$319 00	615 50	934 50
Road bridges (iron)....	2	.....	.....	.....
Tow-path bridges (wood)	2	.....	.....	.....
Tow-path bridges (iron)	2	.....	.....	.....
State scows.....	2	.....	.....	.....
Ice breakers.....	2	.....	.....	.....
Lock-houses.....	4	.....	.....	.....
Work-shops.....	1	.....	.....	.....
Watch-houses.....	1	.....	.....	.....

ANNUAL REPORT, *showing the name and number of structures or works, on section 3.*— (Continued).

STRUCTURES AND WORKS.	Whole number on section.	Cost of new structures.	Cost of repairs of old, etc.	Total new and old.
Raising and repairing tow-path and berme bank, not including repairs to slope walls. . . . .	.....	.....	\$2,563 08	\$2,563 08
Cleaning out bottom of canal during spring repairs. . . . .	.....	.....	833 75	833 75
Dams (feet, 75) . . . . .	.....	.....	.....	.....
Docking. . . . .	.....	\$608 50	452 00	1,060 50
Watching canal. . . . .	.....	.....	1,695 16	1,695 16
Publishing and filing abstract. . . . .	.....	.....	32 34	32 34
Inspecting canal, single horse. . . . .	.....	.....	240 00	240 00
Scraping tow-path. . . . .	.....	.....	16 00	16 00
Tending waste-weirs, cleaning bridges, etc. . . . .	.....	.....	140 00	140 00
Clerical work, disbursing clerk. . . . .	.....	.....	510 00	510 00
Total. . . . .	.....	\$927 50	\$14,147 40	\$15,074 90

### REPAIRS AND IMPROVEMENTS.

Two sets of new gates were placed in lock No. 16 this spring. At the same time the usual repairs were made on all locks on the section.

The usual amount of work at removing bars and bottoming out was done this spring on the five mile level and the twelve mile level, and the culverts and slope walls along the creek were repaired as found necessary.

All of the bridges on the section, thirty in number, have been painted this summer. Early in the season the lock houses were repaired and painted. Repairs necessary to keep the bridges in good condition have been made this season. Four new bridges have been built, namely, Nos. 109, 113, a foot bridge at lock No. 22, and a tow-path bridge near lock No. 19.

According to the summer schedule, 1,500 feet of new docking has been built on the twelve mile level, and 1,000 feet on the five mile level. This is lineal measurement, two sticks of timber. Besides this amount, about 650 lineal feet of one stick docking has been built along the five mile level, the twelve mile level, and Wood creek.

Seven sunken boats have been raised on this section this season.

The State scows were both repaired and painted in the spring.

I would recommend putting in two sets of new lock gates in locks Nos. 22 and 23. I would also recommend that two new State scows be provided, as the present ones are not fit for further service.

GEORGE NEDDO,  
*Superintendent.*

## MIDDLE DIVISION.

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SYRACUSE, N. Y. *January 1, 1909.*

HON. F. C. STEVENS, *Superintendent of Public Works, Albany, N. Y.:*

DEAR SIR.—The annual report for the Middle Division of the New York State Canals is herewith submitted:

The Middle Division comprises three sections of the Erie canal, 5, 6 and 7, covering about 97 miles in distance; the Black River canal, covering a distance of 78 miles; the Oswego canal, covering 38 miles in distance, and the Cayuga and Seneca canals, covering a distance of 23 miles of canal proper. While Cayuga and Seneca lakes are not properly or legally portions of the canal system of the State, both are navigated to quite an extent by canal boats, and at either end are inlets and outlets designed and maintained by State authority for the benefit and convenience of canal traffic.

The aggregate length of navigable canals and rivers upon this division, including 67 miles of side-cuts and navigable feeders, is 303 miles. There are 159 locks, 23 aqueducts, 137 culverts, 148 waste weirs and spillways, 42 dams, 455 bridges, 5 section and 1 division repair shop.

Navigation was uninterrupted on this division during the whole season except on the Oswego canal. This canal opened from the new bascule bridge, in the city of Syracuse, north to Oswego, May 15th. Through navigation was opened June 1st for one week, then, owing to the failure of the bascule bridge, through traffic was closed till August 1st, from which time it remained uninterrupted until the close of navigation.

All the bridges along the whole line of the division were painted, greatly adding to the life of the structures and their appearance. The operator's houses of four of the lift bridges in the city of Syracuse were raised during last winter, in order to give the operator a clear and unobstructed view in either direction.



This resulted in an entire absence of any accidents to pedestrians or boats at these bridges. I would recommend that all the operators' houses of the lift bridges in the cities of Utica and Syracuse be raised where the view is in any way obstructed.

The fact that very little trouble was experienced with any of the lift bridges has demonstrated the wisdom of giving them a thorough overhauling during the closed season.

Under the summer schedule all the masonry structures were repointed and the culverts, waste weirs, bridges, etc., renumbered.

The lock signal system, which was installed under your direction, proved by operation a success and has been of great advantage to boatmen.

The dredge spent a greater part of the season deepening the Cayuga and Seneca canal between Montezuma and Mud lock, and at various other points to Geneva, materially aiding navigation on this canal.

The pump boat, which was put into commission at the opening of navigation, was used in a number of emergency cases, assisting freight laden boats to dry dock, which without help would have sunk in the canal, resulting in a great saving in loss to cargoes and boats.

During the whole of last season the severest and most protracted drought was experienced than in any year for the past fifteen. The capacity of all the reservoirs was taxed to the utmost and it was only with the most economical and careful management that the supply was not exhausted before the official closing of the canals.

An inspection of the Erie and lateral canals of this division will show a marked improvement in their physical condition. Nearly every structure has been thoroughly inspected and repairs made where considered necessary. A greater by over 100 per cent. of repair and improvement work has been carried on than for several years.

GENERAL IMPROVEMENTS ON THE MIDDLE DIVISION OF THE NEW YORK STATE CANALS, FROM JANUARY 1, 1908, TO JANUARY 1, 1909.

*Middle Division.*

Building new pump boat and installing machinery.  
Building two new dump scows for the dredge fleet.  
Building two storehouses at State shop.

*Section No. 5, Erie Canal.*

Repairs to Nail creek culvert at Utica.  
Relaying about 100 feet of towpath wall near the N. Y. C. & H. R. R. Co.'s bridge at Rome.  
Repairs to berme bank at Canastota.  
Repairs to west abutment to Wood creek bridge at Rome.  
Repairs to Genesee street bridge, Utica.  
Repairs to Schuyler street bridge, Utica.  
Repairs to Whitesboro street bridge, Utica.  
Repairs to Washington street bridge, Utica.  
Repairs to Hotel street bridge, Utica.  
Repairs to John street bridge, Utica.  
Repairs to Broad street bridge, Utica.  
Repairs to machinery in power house, used for Genesee street bridge.  
Repairs to wall in front of the Utica Fire Alarm Company's plant at Utica.  
Putting temporary wooden trunk in Durhamville aqueduct.  
Repairs to Kingsley brook aqueduct and the culverts just below.  
Painting all bridges.  
Pointing masonry structures.  
Strengthening berme bank between bridges Nos. 45 and 46.  
Strengthening berme bank at different points between railroad at State bridge and Fort Bull waste weir.  
Graveling towing-path at different points between Oriskany and Durhamville.  
Repairing apron of Oriskany dam.

Repairs to Stone creek culvert.  
Repairs to Oriskany aqueduct.  
Repairs to bank at Brandy brook culvert.  
Cutting grass and brush on Chenango feeder.  
Repairs to leak in Cowassalon feeder.  
Digging or cleaning State ditches.  
Repairing washout in bank and cleaning Madison feeder.  
Repairing dam at Eaton brook reservoir.  
Repairs to leak in berme bank at Canastota.  
Repairs to bridge over Wood creek.  
Taking out towpath side of temporary trunk in Durhamville aqueduct.  
Rebuilding Wickwire bridge.

*Section No. 6, Erie Canal.*

Making permanent repairs to aqueduct over Onondaga creek, Syracuse.

Rebuilding concrete wall between locks Nos. 48 and 49.  
Repairing towing-path wall at Bolivar.  
Repairs to Lewis farm bridge over De Ruyter feeder.  
Repairs to Stone farm bridge over De Ruyter feeder.  
Repairs to abutment of bridge east of Mud lock on Oswego canal.

Repairs to West Genesee street bridge, Syracuse.  
Repairs to Geddes street bridge, Syracuse.  
Repairs to Clinton street bridge, Syracuse.  
Repairs to Salina street bridge, Syracuse.  
Repairs to State street bridge, Syracuse.  
Repairs to Catherine street bridge, Syracuse.  
Repairs to Willow street bridge, Syracuse.  
Repairs to berme wall at lock No. 46.  
Rebuilding abutment of Park street bridge.  
Painting all bridges.  
Pointing masonry structures.  
Graveling towing-path from Camillus feeder to Geddes street bridge.  
Strengthening berme bank at various places between Kirkville and Bolivar.

Strengthening berme bank on Jordan level at Amboy.  
Strengthening berme bank on Liverpool level of Oswego canal.  
Repair to road at head of Erieville reservoir.  
Cleaning out two arches of Canasaraga culvert.  
Draining cellars at Bolivar.  
Breaking stone for use on towpath.  
Construction of new rack at the head of De Ruyter reservoir feeder.  
Digging or cleaning State ditches.  
Repairs to house at Jamesville reservoir.  
Repairs to wall at Bolivar.  
Replacing stone coping on dam of Cazenovia lake reservoir.

*Section No. 7, Erie Canal.*

Replacing oak caps on Jordan aqueduct.  
Repairs to machinery and bulkhead at lock No. 51.  
Repairs to machinery and lock house at lock No. 52.  
Repairs to Jordan aqueduct, by placing concrete under piers and breast wall for a distance of about 60 feet in length, 22 feet in width and 2 or 3 feet in depth.  
Repairs to leak at Jordan lock or lock No. 51.  
Building new State scow.  
Painting all bridges.  
Pointing masonry structures.  
Cutting grass in Owasco feeder.  
Cleaning out arches under Centerport aqueduct.  
Rebuilding dam in Centerport feeder.  
Breaking stone for use on towpath.  
Digging or cleaning State ditches.  
Building and painting fence around State yard at Port Byron.

*Oswego Canal.*

Repairs to chamber walls at lock No. 7.  
Repairs to side walls and bottom of locks Nos. 12 and 14.  
Repairs to the division wall between canal and river at Oswego.  
Removal of sunken pier at Cold Spring bridge.  
Painting all bridges.

Rebuilding slope wall in places on level 5, between Phoenix and Baldwinsville.

Repairing bank at Caughdenoy lock.

Cutting brush on towpath.

Digging or cleaning State ditches.

Removing part of apron at the Minetto dam.

Repairs to machinery of hydraulic head gates at Oswego.

Repairs to break between locks Nos. 13 and 14.

Rebuilding division wall at Oswego.

#### *Cayuga and Seneca Canal.*

General repairs to dry dock at Waterloo.

Relining lock No. 1.

Repairs to breast wall and upper gates of lock No. 3.

Relaying bottom of lock No. 4.

Installing new lock gates in locks Nos. 1, 3 and 4.

Putting in pile docking at Geneva.

Putting in guard piles at locks Nos. 4 and 6.

Painting all bridges.

Repairs to division wall at Seneca Falls by resetting cap stones.

Cutting brush and willow trees between Mud lock and guard lock at Geneva.

Reconstruction of breakwater and pier at Cayuga.

Breaking stone for use on towpath.

Building fence around State yard at Waterloo.

#### *Black River Canal.*

Repairs to sluice at lock No. 2.

Repairs to sluice at lock No. 14.

Repairs to sluice at lock No. 31.

Repairs to sluice at lock No. 48.

Repairs to lock No. 3 by taking down both walls and rebuilding same in concrete.

Repairs to lock No. 32 by putting in new concrete bottom.

Repairs to lock No. 38 by chipping walls and repointing same.

Repairs to locks Nos. 41, 42 and 43 by chipping walls and repointing same.

Repairs to lock No. 58 by taking down both walls and rebuilding in concrete.

Repairs to break in towing-path between locks Nos. 13 and 14.

Repairing slide in bank between locks Nos. 43 and 44.

Repairs to State dam at lock No. 34.

Repairs to break at railroad aqueduct at Westernville.

Repairs to State house, sluiceway and dam at North lake.

Repairs to North lake road from Forestport to North lake.

Repairs to Lee and Slocum culverts, Forestport feeder.

Repairs to Baby dam at North lake.

Repairs to slide at the Five Combine locks.

Repairs to abutments and machinery of Castorland bridge.

Repairs to State house at North lake.

Repairs to Alder creek reservoir bridge.

Replanking superstructure and repointing the substructure of the Beaver river, Illingsworth and Beaches bridges.

Repairs to lock house at lock No. 1.

Cleaning out bar in Harris creek at Westernville.

### *Special Appropriations.*

Repair of and extension to the sea wall at the foot of Owasco lake.

Construction of concrete retaining wall on northerly side of Oneida creek in the village of Oneida Castle.

Improvement of Cayuga inlet at Ithaca, N. Y.

Repairing and protecting the dam on Beaver river at Stillwater.

Repairs to bridges over Twitchell creek to restore the Lake Champlain-Carthage road.

Repairs to roads on Onondaga Indian reservation.

I desire at this time to express my appreciation to the subordinates on this division for their faithful and efficient services.

A financial table showing the total expenditures under ordinary repairs during the fiscal year is appended hereto.

CHAS. C. BARRETT,

*Assistant Superintendent.*

DETAILED STATEMENT OF ordinary expenditures on the Middle Division of the New York State canals, by  
*Chas. C. Barrett, Assistant Superintendent of Public Works, from October 1, 1907, to September 30, 1908.*

	ERIE CANAL.			Middle division.	Oswego canal.	Cayuga and Seneca.	Black river.	Office expense.	Totals.
	Section 5.	Section 6.	Section 7.						
Blacksmithing.....		\$29 94	\$10 60	\$21 04	\$101 28	\$94 98	.....	.....	\$257 84
Material for structures.....				4 74	.....	.....	.....	.....	1,109 87
Mechanists' work for bridges.....	\$248 83	856 30	.....	516 55	85 20	760 46	\$45 65	.....	2,188 48
Coal for all purposes.....	219 55	503 20	57 87	.....	.....	.....	.....	.....	.....
Mechanists' work on structures, hardware, rope, castings, etc.....	837 55	3,015 83	783 79	2,844 71	807 89	826 96	875 40	.....	9,992 13
Oils, paints, etc.....	1,031 34	2,067 71	358 87	2,404 88	579 90	654 24	151 02	.....	5,247 06
Lumber for structures.....	4,438 85	4,059 55	3,373 08	3,534 60	4,228 63	3,608 44	7,515 84	.....	30,758 70
Labor and team work.....	11,707 30	22,992 84	5,570 63	17,407 08	2,348 76	9,274 38	5,218 66	.....	74,519 65
Reservoir and feeder tending.....	1,200 00	1,020 00	180 00	.....	.....	.....	1,200 00	.....	3,600 00
Stone, sand, lime, cement, etc.....	161 45	1,948 52	211 00	36 06	91 80	544 00	171 95	.....	2,164 78
Stationery, stamps, light, heat, water, etc.....	.....	.....	.....	.....	.....	.....	.....	562 89	562 89
Clerks stenographer.....	.....	.....	.....	.....	.....	.....	.....	3,200 00	3,200 00
Express, telephone, telegraph, freight, etc.....	178 65	256 95	48 08	479 73	60 30	69 25	108 23	559 21	1,760 39
Equipments.....	91 60	423 50	29 04	2,216 84	30 00	.....	204 79	231 45	3,227 22
Totals.....	\$20,115 12	\$36,174 34	\$10,622 96	\$27,466 23	\$8,333 76	\$15,832 71	\$15,491 33	\$4,553 55	\$138,590 00

ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on section 5 of the Erie canal, under the charge of D. F. Brietenstein, superintendent of repairs, during the 366 days ended September 30, 1908.

STRUCTURES OR WORKS, ETC.	Whole number on section.	Cost of repairs of old.	Total new and old
Locks.....	1	\$53 62	\$53 62
Lock-tending (exclusive of oil).....	.....	1,882 72	1,882 72
Lock-gates.....	8	.....	.....
Aqueducts.....	3	.....	.....
Waste-weirs.....	4	.....	.....
Culverts.....	38	493 66	493 66
Road bridges (iron).....	86	2,062 06	2,062 06
State scows.....	2	28 88	28 88
Small boats.....	1	.....	.....
Ice breakers.....	1	.....	.....
Lock-houses.....	1	.....	.....
Work-shops.....	2	.....	.....
Watch-houses.....	1	.....	.....
Store-houses.....	1	.....	.....
Timber-sheds.....	1	.....	.....
Raising and repairing tow-path and berme bank, not including repairs to slope walls.....	.....	2,115 80	2,115 80
Cleaning out bottom of canal during spring repairs.....	.....	1,159 56	1,159 56
Slope wall.....	.....	906 87	906 87
Docking.....	.....	1,243 83	1,243 83
Breaking ice and assisting boats in consequence of ice.....	.....	32 75	32 75
Watching canal.....	.....	3,157 56	3,157 56
Other miscellaneous expenditures.....	.....	84 66	84 66
Unloading and piling lumber..	.....	386 86	386 86
Care of and repairs to lift bridges	.....	960 00	960 00
Team for superintendent going over section.....	.....	142 80	142 80
Sheet piling.....	.....	53 86	53 86
Tending Hotel street lift bridge.	.....	2,123 04	2,123 04
Publishing abstract.....	.....	42 90	42 90
Disbursing clerk.....	.....	600 00	600 00
Setting snubbing posts.....	.....	35 53	35 53
Placing barriers on tow-path...	.....	9 75	9 75
Mowing grass.....	.....	570 43	570 43
Cleaning office.....	.....	84 00	84 00
Assisting carpenters.....	.....	48 00	48 00
Total.....	.....	\$18,279 14	\$18,279 14



## REPAIRS AND IMPROVEMENTS.

*Locks.*

During the spring minor repairs were made to lock No. 46.

*Culverts.*

Repairs were made to all culverts on section when necessary and culvert at Starch Factory creek has been cleaned out.

*Bridges.*

We have made minor repairs to all bridges on section and have replanked bridges 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 34, 35, 36, 37, 38, 39 and have put up a new bridge to replace old bridge No. 58.

*State Scows.*

Both scows have been repainted and made ready for service.

*Docking.*

Old dock sticks have been taken out and new ones put in when needed along section.

*Miscellaneous.*

During the spring repairs the sand bars were all removed and the prism of canal put in good condition.

All grass and weeds along the section were cut and done away with.

Snubbing posts were put in at different points along section.

The season has been exceedingly dry, but have been able to maintain our levels at their normal depth.

*Recommendations.*

I would recommend that the towpath be graveled in the vicinity of New London, at Fort Bull and between Rome and Oriskany.

D. F. BREITENSTEIN,  
*Superintendent.*

ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on section 6 of the Erie canal, under the charge of E. J. Clark, superintendent of repairs, during the 366 days ended September 30, 1908.

STRUCTURES OR WORKS, ETC.	Whole number on section.	Total cost of repairs, old and new.
Locks.....	8	\$76 28
Lock-tending (exclusive of oil).....		9,780 16
Sluices.....		154 84
Lock-gates.....	50	431 40
Aqueducts.....	4	.....
Waste-weirs.....	8	.....
Culverts.....	26	708 79
Weigh-locks, machinery taken out.....	1	.....
Farm bridges (wood).....	6	.....
Road bridges (wood).....	13	.....
Road bridges (iron).....	39	2,725 01
Tow-path bridges (wood).....	2	.....
Tow-path bridges (iron).....	3	.....
Tow-path bridges, floating.....	2	.....
State scows.....	2	.....
Lock-houses.....	8	14 51
Store-house.....	1	.....
Timber-sheds, unloading and stacking lumber.....		248 26
Retimbering horse holes.....		60 66
Raising and repairing tow-path and berme bank, not including repairs to slope walls.....		1,166 15
Cleaning out bottom of canal during spring repairs.....		622 23
Slope wall.....		210 10
Docking.....		304 26
Breaking ice and assisting boats in consequence of ice.....		20 75
Watching canal.....		2,982 19
Other work of consequence which does not come under any of the above heads, viz.:		
Raising sunken boats.....		146 66
Publishing and filing.....		54 42
Draining levels.....		26 62
Setting snubbing posts.....		26 00
Clerk.....		900 00
Cutting weeds and brush.....		1,018 98
Total.....		\$21,678 27

## REPAIRS AND IMPROVEMENTS.

All bridges on this section have been carefully inspected during the season, and repairs made as follows:

Bear and Division street bridges: railing taken down, bed pieces replaced by new timbers, railings reset and other repairs.

Haskins raceway and Willow street bridges replanked.

On the Erie canal, bridges Nos. 69, 90, 91, 93 and 94: new floors including sidewalks, railings reset, new skirting and other repairs. Bridges Nos. 98, 100, 103, 104, 105 and 109: new floors, joist renewed where needed.

Orville feeder bridge replanked.

A monument has been set over each culvert (berme side) and the proper number placed thereon, greatly aiding its location while passing through the canal.

Weeds and brush have been cut on both sides of the canal the entire length of this section.

Lock machinery has been overhauled and renewed, two new gates placed in position at lock No. 5, Oswego, and all necessary repairs made to other gates.

Navigation on Section 6, Erie, has been uninterrupted during the season. Oswego opened from bascule bridge north on May 15th, through navigation opened June 1st for one week, then, owing to the collapse of the bascule bridge, through traffic was closed until August 1st, from which time it remained uninterrupted till the close of navigation.

Extra effort has been put forth to keep the towing-path through the city of Syracuse clean and attractive. With the co-operation of property owners adjacent much has been accomplished in this direction.

E. J. CLARK,  
*Superintendent.*

ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on section 7 of the Erie canal, under the charge of Albert B. Hallett, superintendent of repairs, during the 366 days ended September 30, 1908.

STRUCTURES OR WORKS, ETC.	Whole number on section.	Cost of repairs, of old, etc.	Total new and old.
Locks.....	2	\$320 12	\$320 12
Lock-tending (exclusive of oil).....	....	.....	3,806 16
Lock-gates.....	16	129 39	129 39
Aqueducts.....	5	197 21	197 21
Waste-weirs.....	3	27 97	27 97
Culverts.....	21	.....	.....
Farm bridges (wood).....	3	.....	.....
Farm bridges (iron).....	1	.....	.....
Road bridges (wood).....	10	359 39	359 39
Road bridges (iron).....	12	.....	.....
Tow-path bridges (wood).....	2	.....	.....
Tow-path bridges (iron).....	1	.....	.....
State scows.....	2	63 96	63 96
Small boats.....	1	.....	.....
Ice breakers.....	1	30 27	30 27
Lock-houses.....	2	.....	.....
Work-shops.....	1	.....	.....
Watch-houses.....	2	.....	.....
Raising and repairing tow-path and berme bank not including repairs to slope walls.....	....	.....	2,507 86
Cleaning out bottom of canal during spring repairs.....	....	.....	176 40
Dams (feet 257).....	4	7 20	7 20
Slope wall.....	.....	.....	350 93
Docking.....	.....	.....	110 90
Breaking ice and assisting boats in consequence of ice.....	.....	.....	108 00
Watching canal.....	.....	.....	2,052 08
Wheel-barrows.....	.....	6 00	6 00
Other work of consequence which does not come under any of the above heads, viz:			
Mowing weeds.....	.....	.....	723 79
Grading approaches to bridges.....	.....	.....	14 77
Distributing money.....	.....	.....	63 00
Disbursing clerk.....	.....	.....	495 00
Publishing and filing abstract.....	.....	.....	40 32
Rip-rap wall.....	.....	.....	106 23

ANNUAL REPORT, showing the name and number of structures or works, on section 7.— (Continued).

STRUCTURES OR WORKS, ETC.	Whole number on section.	Cost of repairs, of old, etc.	Total new and old.
Team for superintendent to go over section.....	....	.....	\$47 25
Repair of Owasco Feeder.....	....	.....	135 99
Drawing timber from Syracuse to Port Byron State yard.....	....	.....	86 50
General work at state yard and shop.....	....	.....	218 45
Removing dead animals from canal.....	....	.....	15 00
Closing canal, feeders, etc.....	....	.....	50 49
Taking care water during freshet.....	....	.....	14 40
Back ditching near Centerport.....	....	.....	92 83
Taking care water at lock 51 and 52 during filling of canal.....	....	.....	19 20
Snubbing posts and culvert markers.....	....	.....	231 20
Total.....	....	.....	\$12,608 26

## REPAIRS AND IMPROVEMENTS.

### *Bridges.*

Bridges Nos. 98, 104, 105, 111, 113 have had new decking, also bridge over Port Byron aqueduct.

Bridge over Skaneateles feeder at Jordan has been built new.

Necessary repairs have been made to bridges Nos. 100, 101, 114, 124.

### *Docking.*

To the amount of 500 lineal feet has been placed on the Weedsport level.

### *Towing-path.*

About 4 miles of towing-path on Jordan level, 1 mile on Weedsport level, and various other places, where needed, has been raised and graveled. The towing-path was also scraped the entire length.

Weeds and brush have been cut and burned on both sides of canal.

Have had no trouble on account of water and navigation has been uninterrupted during season.

A. B. HALLETT,  
*Superintendent.*

ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on the Oswego canal, under the charge of D. S. Burleigh, superintendent of repairs, during the 366 days ended September 30, 1908.

STRUCTURES OR WORKS, ETC.	Whole number on section.	Cost of new structures.	Cost of repairs of old, etc.	Total new and old.
Locks.....	22	.....	\$878 85	\$878 85
Lock-tending (exclusive of oil).....	.....	.....	.....	7,145 14
Lock-gates.....	116	\$573 75	156 38	730 13
Aqueducts.....	1	.....	.....	.....
Waste-weirs.....	8	.....	.....	.....
Culverts.....	4	.....	.....	.....
Road bridges (wood).....	7	.....	305 19	305 19
Road bridges (iron).....	10	.....	27 50	27 50
Tow-path bridges (wood).....	4	.....	.....	.....
State scows.....	1	.....	75 01	75 01
Ice breakers.....	1	.....	.....	.....
Lock-houses.....	20	.....	.....	.....
Work-shops.....	1	.....	136 50	136 50
Timber-sheds.....	1	.....	.....	.....
Raising and repairing tow-path and berme bank not including repairs to slope walls.....	.....	.....	.....	457 61
Cleaning out bottom of canal during spring repairs.....	.....	.....	.....	306 84
Watching canal.....	.....	.....	.....	1,483 06
Other miscellaneous expenditures.....	.....	.....	.....	1,443 26
Other work of consequence which does not come under any of the above heads, viz:				
Team for paying off.....	.....	.....	.....	60 00
Cutting brush.....	.....	.....	.....	320 00
Publishing abstracts.....	.....	.....	.....	38 10
Filing abstracts.....	.....	.....	.....	3 72
Disbursing clerk.....	.....	.....	.....	562 50
Total.....	.....	.....	.....	\$13,973 41

## REPAIRS AND IMPROVEMENTS.

New balance beams have been put on Oak Orchard and Caughdenoy locks.

Two new gates have been placed at guard lock No. 5, also two at guard lock No. 1.

The bushes that grow along the towpath are being cut and ditches cleaned out where necessary.

The lock at Caughdenoy needs a new bottom and guard lock No. 1 at Phoenix should be cleaned out this winter.

Bridge and lock street bridges at Phoenix need repairing as soon as navigation closes, and the bridge at Three River Point should be replaced by a new one at once.

Owing to the extreme dry season it has been very difficult to maintain navigation.

D. S. BURLEIGH,  
*Superintendent.*

ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on the Cayuga and Seneca canal, under the charge of O. E. Emens, superintendent of repairs, during the 366 days ended September 30, 1908.

STRUCTURES OR WORKS, ETC.	Whole number on section.	Cost of new structures.	Cost of repairs of old, etc.	Total new and old.
Locks.....	11	.....	.....	\$297 68
Lock-tending (exclusive of oil).....	.....	.....	.....	5,764 72
Lock-gates.....	48	.....	.....	432 21
Waste-weirs.....	1	.....	.....	.....
Culverts.....	9	.....	.....	.....
Farm bridges (wood).....	1	.....	.....	.....
Road bridges (wood).....	7	\$124 42	\$582 42	706 84
Road bridges (iron).....	12	.....	.....	.....
Tow-path bridges (wood).....	26	.....	.....	.....
State scows.....	1	.....	.....	61 55
Lock-houses.....	3	.....	.....	.....
Work-shops.....	1	.....	.....	.....
Watch-houses.....	8	.....	.....	.....
Raising and repairing tow-path and berme bank not including repairs to slope walls.....	.....	.....	.....	1,425 79
Dams (feet ).....	5	.....	.....	126 21
Docking.....	.....	.....	.....	518 55
Breaking ice and assisting boats in consequence of ice.....	.....	.....	.....	30 49
Watching canal.....	.....	.....	.....	811 92
Other work of consequence which does not come under any of the above heads, viz:				
State shop and yard.....	.....	.....	.....	241 01
Cutting weeds.....	.....	.....	.....	150 56
Dry dock.....	.....	.....	.....	67 18
Work at State shop.....	.....	.....	.....	124 50
Aiding sunken and grounded boats.....	.....	.....	.....	133 96
Disbursing clerk and collector.....	.....	.....	.....	562 50
Lighthouse keeper.....	.....	.....	.....	143 22
Publishing abstracts.....	.....	.....	.....	37 20
Caring for bridges and guard lock (winter).....	.....	.....	.....	210 00
Livery to pay off with.....	.....	.....	.....	56 00
Total.....	.....	.....	.....	\$11,902 09



## REPAIRS AND IMPROVEMENTS.

All bridges have been wholly or partially planked and repaired.

New gates were installed in locks as follows: two at lock No. 2, one each at Nos. 3 and 4 and two at lock No. 10.

Ten hundred and fifty lineal feet of docking installed at Waterloo, Mud lock and Montezuma.

Towing-path the entire length has been more or less repaired.

Head gates and feeder at Montezuma repaired.

The following recommendations are respectfully submitted:

.The towing-path from Locust street bridge, Waterloo, for a distance of about two miles should be raised, as it is under water for a considerable time during the high water in early spring.

The piling along towing-path near Lake St. Geneva should be replaced with new.

New piling should be installed at Soap Mine bridge (Marsh creek) and a new bridge erected; this structure is in a very dilapidated condition.

O. E. EMENS,  
*Superintendent.*

ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on the Black River canal, under the charge of J. A. Fiske, superintendent of repairs, during the 366 days ended September 30, 1908.

STRUCTURES OR WORKS, ETC.	Whole number on section.	Cost of new structures.	Cost of repairs, of old, etc.	Total new and old.
Locks.....	113	.....	.....	.....
Lock-tending (exclusive of oil).....	.....	.....	.....	\$9,900 00
Lock-gates.....	406	\$719 00	\$300 83	1,019 83
Acqueducts.....	6	.....	.....	.....
Waste-weirs.....	11	.....	.....	.....
Culverts.....	19	.....	.....	.....
Bridge tending.....	.....	.....	780 00	780 00
Farm bridges (wood).....	36	.....	.....	.....
Farm bridges (iron).....	26	216 15	490 90	752 05
Road bridges (wood).....	7	.....	.....	.....
Road bridges (iron).....	22	.....	.....	.....
Tow-path bridges (wood).....	7	.....	.....	.....
Tow-path bridges (iron).....	2	.....	.....	.....
State scows.....	2	.....	.....	.....
Small boats.....	1	15 00	.....	15 00
Lock-houses.....	54	.....	30 60	30 60
Work-shops.....	2	.....	51 75	51 75
Watch-houses.....	3	.....	.....	.....
Timber-sheds.....	2	.....	.....	.....
Piling Machines.....	1	.....	.....	.....
Raising and repairing tow-path and berme bank not including repairs to slope walls.....	.....	.....	859 28	859 28
Cleaning out bottom of canal during spring repairs.....	.....	.....	1,646 95	1,646 95
Slope wall (Rip-Rap).....	.....	.....	806 52	806 52
Docking.....	.....	.....	198 27	198 27
Repair of breaches.....	.....	.....	221 25	221 25
Watching canal.....	.....	.....	2,412 00	2,412 00
General repairs.....	.....	.....	.....	3,436 00
Scraping tow-path, Forest-port to Rome.....	.....	.....	.....	180 00
Cutting brush from Forest-port to Rome.....	.....	.....	.....	371 05
Raising and assisting sunken boats.....	.....	.....	.....	73 10

ANNUAL REPORT, *showing the name and number of structures or works on the Black River canal.*— (Continued).

STRUCTURES OR WORKS, ETC.	Whole number on section.	Cost of new structures.	Cost of repairs, of old, etc.	Total new and old.
Cleaning dirt from Carthage bridge.....	.....	.....	.....	\$9. 90
Opening waste weirs on feeder spring freshet....	.....	.....	.....	13 25
Moving machinery from Lock 59 to Boonville and loading same on cars.....	.....	.....	.....	142 71
Painting Superintendent's office, Collector's office, State shop, yard fence, lock house and blacksmith shop.....	.....	.....	.....	232 27
Repairing sluices.....	.....	.....	.....	559 46
Distributing timber and lumber also picking up and stacking in yard....	.....	.....	.....	418 96
Opening and closing canal.....	.....	.....	.....	181 07
Unloading and stacking lumber.....	.....	.....	.....	158 60
Publishing abstracts.....	.....	.....	.....	52 13
Cleaning office for one year.....	.....	.....	.....	42 00
Livery for inspectors and paying off.....	.....	.....	.....	252 00
Tending Forestport guard lock and residence.....	.....	.....	.....	360 00
Tending Delta guard lock and feeder.....	.....	.....	.....	60 00
Disbursing clerk.....	.....	.....	.....	900 00
Total.....	.....	.....	.....	\$26,136 00

## WESTERN DIVISION.

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OFFICE OF THE ASSISTANT SUPERINTENDENT OF PUBLIC WORKS,  
ROCHESTER, N. Y., *December 31, 1908.*

HON. F. C. STEVENS, *Superintendent of Public Works, Albany,  
N. Y.:*

Dear Sir.—I submit herewith the annual report relating to the Western Division of the canals, for the fiscal year ended September 30, 1908.

This division of the Erie canal was opened for navigation with a full depth of water upon the official date given, May 5th, and with the exception of the periods hereinafter mentioned continued throughout the season with a full supply of water.

On May 5th, at 4 o'clock p. m.; a leak was discovered in the berme bank of the canal, a short distance east of canal bridge No. 92, near South Greece, which resulted in a portion of the embankment being washed out, and in drawing about three feet in depth of water from that portion of the Sixty-mile level, east of Adams basin stop gates. Repairs were completed on May 21st.

On May 26th, at 2:30 o'clock p. m., water was observed passing through the towpath bank of the canal at a point just east of canal bridge No. 48, east of Bushnell's basin, resulting in carrying out a portion of the embankment and undermining the towpath bridge abutment, which caused the bridge to fall into the canal. Repairs were completed and the refilling of the canal began on June 4th.

On November 16th, at 2 o'clock p. m., a small break occurred in the towpath bank of the canal at a point between locks Nos. 64 and 65, in the village of Brighton. Navigation was resumed on the morning of November 18th.

The causes leading to the failure of said embankments are not known with any degree of certainty, but the fact is apparent that notwithstanding the constant watch and care given them by the bank-watchmen during the season of navigation, throughout the division, these breaks occurred, and at widely-separated points, indicating that weak spots are liable to be developed where least thought of, and that still greater vigilance and watch care should be applied to the canal banks throughout their entire extent.

The Barge canal work will necessarily deal with the cutting of the present banks of the canal in many places; for the purpose of repairing and extending old culverts and the construction of new ones; with the removal of old banks and the construction of new banks; with the raising of some portions of the present banks with new materials, and with the construction of new structures along the canal. It is of the utmost importance to the safety of the canal at the opening of the same for navigation next spring, and thereafter, that all embankments whether entirely or partially new; all joinings of new with old embankments and all back filling connected with any culvert beneath the canal, shall be made water-tight, and to this end, each individual piece of work should be carefully and constantly inspected during the entire period of its construction.

I recommend as follows:

The State shops in Buffalo and Lockport should be equipped with planers, saws, mortise and other machines necessary for the preparation of timber required in the construction of bridges, boats and lock gates.

The docks, dock walls and piling existing along the canal at various points in the city of Buffalo, should be renewed in accordance with a carefully prepared plan of the same.

All timber dock sticks existing on vertical walls through cities and villages, when decayed, should be replaced with concrete.

A gasoline motor launch is required for use on the Western Division in the inspection of bridges, culverts and canal banks.

An air compressor, having sand blast and spray attachments, is required for use in cleaning and painting bridges.

A stone crusher should be installed adjacent to the canal in the vicinity of Medina or Albion, to furnish broken stones for use in making concrete, grading towpath, etc.

A short switch, which now exists extending from the main track of the Lehigh Valley railroad, in Rochester, past the lumber shed in the State yard, should be extended past the rear of the cement warehouse to facilitate the loading and unloading of cement.

The following is a list of repairs, ordinary and special, made on the Western Division during the fiscal year, 1907-1908.

Itemized expenditures for labor and materials on account of these repairs will be found in the annexed tabulated statements.

## ORDINARY REPAIRS.

### SECTION No. 8.

Bridges Nos. 13 to 34, inclusive, were painted; towpath was scraped and graded from Lyons to west end of section; also from Lyons to east end of section, and the rear of towpath was ditched so as to take surface water from the same. Eel grass was cut and removed from the canal from lock No. 60 to bridge No. 1.

Labor not estimated for by Section Superintendent was employed in unloading and storing lumber and cement at the Palmyra State yard, and watching banks and attending locks preparatory to opening of canal navigation for the season.

### SECTION No. 9.

Dams were put in at locks Nos. 64, 65 and 66 to facilitate repair work. A new pier and platform were built at locks Nos. 62 and 65. Machinery broken during the season of navigation was taken out and new machinery put in its place at lock No. 65. Bridges Nos. 61 to 112, inclusive, were painted; Douglas bridge No. 92 and Wappinger's bridge No. 48 were rebuilt, and the lift bridges in Rochester and other bridges on the section were replanked and repaired as occasion required. The machinery of the lift bridges in Rochester was properly put in repair for the next season's opening. The iron pipe line supplying water

for the operation of the Brighton lift bridge was repaired where it had become broken. Concrete and Medina stone paving were applied to the towpath under west end of West avenue lift bridge, and the tanks connected with such bridge were repaired. The scow "Thos. Heaver" was repaired and the ice-breaker was covered with a steel sheathing.

One hundred and ten lineal feet of sheet piling was driven in the towpath at a point in the high embankment about one mile west of Four Mile grocery for stoppage of leak. Culvert No. 43 was repaired by trenching and puddling and a leak was stopped through towpath adjacent to Auchter's farm by driving sheet piling.

The towpath was scraped and gravelled at various points between bridges Nos. 93 and 112.

#### SECTION No. 10.

State buildings and fence around same at Combined locks in Lockport; also balance beams and railings connected with said locks were painted.

General repairs of Combined locks and Sulphur Springs guard lock were made, including the removal of old gates at west end of towpath lock No. 71, inserting new gates and valves therein, also one large valve in said lock. Ten hundred lineal feet of timber guard-rail along towpath at the head of lock No. 71 was painted.

Bridges Nos. 113 to 167, inclusive, were painted by a force especially organized for that work. Guard rails on approaches to bridges where needed throughout the section were constructed.

Repairs were made to Chapel street bridge No. 158, in Lockport, and the repairs of other section bridges were made as they became necessary.

The State scows "Albion" and "Lockport" were repaired, and the section pump-boat was repaired and painted. The towpath was cindered at various points between bridge No. 166, west of Lockport, and a point east of Albion. Old hulks were removed from the wide waters adjacent to the canal east of Lock-

port at bridge No. 165. A washout at bulkhead in Oak Orchard creek feeder, near Tonowanda creek, was repaired by filling in new material.

Fallen walls were rebuilt between bridges Nos. 166 and 168, and were repaired as follows: between bridges Nos. 118 and 121, 130 and 140, 145 and 146, 156 and 157, and between bridge No. 160 and the Combined locks.

Culvert No. 78 was stripped near the berme side of canal and recovered with concrete.

Waste weir and spillway No. 24 were repaired by pointing and grouting same. Towpath retaining wall on west side of bridge No. 161 was relaid where fallen out, and the bulkhead wall beneath bridge No. 161 was repointed.

During spring repairs, stones were removed from canal bottom between bridge No. 164 and the Sulphur Springs guard lock; also between the Combined locks and bridge No. 155, and slit was removed from the canal near the west end of the Medina aqueduct.

#### SECTION No. 11.

The following bridges were painted, viz: Nos. 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 189½, 190, 191, 193, 194, 196, Porter avenue bridge, 196½, 197 and 198.

The east abutment of slip No. 1 was repaired.

Dredging was performed at the following places, and for the following amounts:

At Curtis malt house, 40 cubic yards;

At Tonawanda, 100 cubic yards;

Between Genesee and Georgia streets, Buffalo, 10,300 cubic yards;

Between Genesee street and slip No. 3, Buffalo, 3,500 cubic yards;

Between Genesee street and Commercial slip, Buffalo, 3,500 cubic yards;

Between Water and Lake streets, Buffalo, 3,500 cubic yards;

Between Erie and Evans streets, Buffalo, 3,500 cubic yards;

Between Erie and Georgia streets, Buffalo, 6,000 cubic yards;



At Genesee street bridge, sunken boat and 700 cubic yards.

A slide occurred in the towpath of the canal from Delaware street in Tonawanda, easterly, for about 600 feet. This was repaired by the construction of a new pile docking.

The towpath at various points between Sulphur Springs guard lock and Bush's bridge was repaired with cinders boated from Buffalo.

The towpath at points between Cramer's bridge and Three Mile Bend, also between Jersey street and Grand Island bridge was cindered.

#### *Western Division.*

Labor for ordinary repairs was applied as follows:

Making tumble gate for lock No. 65; lower gates for locks Nos. 55 and 58; crooked balance beams for lock No. 57 and gates for lock No. 53. Lockirons were forged for these and other locks of the division. Cap timbers, posts and railing were framed for lock No. 62; platform, paddles and tumble gate for lock No. 65, and cap timbers, and wheel pit wedges were also made for same.

A new gate was made for lock No. 71, and minor repairs were also made for other locks on the division.

Various repairs were made by the Western Division shop force on the lift bridges in Rochester.

The east abutment of bridge over outlet of Keuka lake, at Liberty street, Penn Yan, was tied back with iron rods, thoroughly anchored.

The pile-driver and scow "Thos. Heaver" were repaired, and a new ice-breaker, sheathed with iron, was built.

Sheet piling was prepared at the Western Division shop for use on high embankment.

The concrete walls on each side of the outlet of Keuka reservoir were repaired with concrete.

A washout near the bridge crossing the spillway and outlet of Cuba reservoir was repaired, and the gate-house at the reservoir was repainted.

A small storage shed was constructed in State yard, and a new fence was built on the west and south sides of the State yard, in Rochester.

## SPECIAL APPROPRIATIONS.

*Chap. 578, Laws of 1907.*

## SECTION No. 8.

Ditch discharging from culvert No. 4, ditch along foot of towpath for 500 feet west and 1,000 feet east of bridge No. 13, and ditch for 600 feet north and 500 feet south of culvert No. 14 were cleaned out.

Ditch along foot of towpath bank west of bridge No. 21, ditch along berme side of canal at lock No. 57, and 600 feet of ditch along towpath bank near culvert No. 18, were cleaned.

Two hundred and fifty feet of ditch along premises owned by Dr. Hennessey, at Palmyra, was cleaned; also, 1,100 feet of ditch along foot of towpath and 400 feet of outlet of same were cleaned between culverts Nos. 31 and 31½.

Seven hundred feet of ditch was cleaned out along foot of berme bank, eastward from culvert No. 25.

Two thousand five hundred lineal feet of ditch was cleaned out along foot of berme bank between culvert No. 5 and the West Shore railroad bridge, and 500 lineal feet between the New York Central and Hudson River railroad bridge and culvert No. 6.

One thousand lineal feet of ditch was cleaned on towpath side of canal west of bridge No. 6, across the lands of Philander Mott, and 500 feet along foot of towpath connecting with the above.

Six hundred lineal feet of ditch along the foot of the towpath between bridge No. 9 and culvert No. 13, and 1,000 lineal feet extending southerly from said culvert, were cleaned.

A ditch was dug along the rear of the towpath from bridge No. 10 to bridge No. 12, about three-quarters of a mile.

Two hundred lineal feet of ditch along towpath bank was cleaned out between lock No. 59 and the Northern Central railroad.

Two thousand three hundred lineal feet of ditch was cleaned out across Palmer flats and the Goldsmith property.

One thousand feet of ditch was cleaned out along foot of towpath bank between bridges Nos. 34 and 35, and 1,000 feet cleaned along foot of berme bank near lock No. 61.

One thousand lineal feet of ditch on towpath side of canal was cleaned out across the property of James Murray, near Macedon; also 2,300 feet on towpath side of canal between bridges Nos. 39 and 40.

### SECTION No. 9.

The outlet ditch from culvert No. 42 was opened for a distance of one-half mile.

One hundred and fifty lineal feet of six-inch vitrified pipe was laid along foot of towpath embankment, east of Adams basin, opposite premises of Mrs. Jones, and 300 lineal feet was cleaned out along foot of towpath embankment to pipe culvert across highway, and for 500 feet north of said culvert on property owned by Mrs. Jones.

Three hundred and sixty lineal feet of ditch was cleaned out along foot of towpath bank adjacent to Auchter's farm.

Four hundred lineal feet of ditch was made on Prendergast property, east of bridge No. 94.

Five hundred lineal feet of ditch was made along towpath bank adjacent to the Leibeck property, between culvert No. 44 and bridge No. 92.

Five hundred lineal feet of ditch along towpath bank was cleaned out along the Hiscock property, east of bridge No. 96, also 1,800 feet along towpath adjacent to the Beaney farm, east of bridge No. 97.

Four hundred and eighty lineal feet of six-inch tile was placed and covered along the foot of the towpath bank adjacent to the Auchter farm.

Five hundred lineal feet of ditch was cleaned out along foot of towpath bank east from culvert No. 42, and 500 feet cleaned out west from said culvert.

One thousand lineal feet of ditch was cleaned along the foot of the towpath bank between culvert No. 45 and bridge No. 93, adjacent to the Earl property.

Ditch along foot of towpath bank was cleaned out and outlet made therefor on the Brigham estate.

Nine hundred lineal feet of ditch and outlet therefor were cleaned and 320 lineal feet of tile drain was laid along foot of towpath bank on the Rich and Hewitt farms.

Three hundred lineal feet of ditching was done west of culvert No. 51; 950 feet along foot of berme bank east of said culvert, and 900 feet along berme bank east of culvert No. 50, all adjacent to the Brown farm.

One thousand lineal feet of ditch was cleaned along foot of berme bank west of bridge No. 92.

Eight hundred and fifty lineal feet of ditch was cleaned along foot of towpath bank near culvert No. 45, and outlet therefor cleaned for a distance of 500 feet.

#### SECTION No. 10.

Ditches between bridges Nos. 153 and 154, along berme bank of canal, were opened to culvert No. 120.

Two thousand five hundred lineal feet of ditch was cleaned out along berme bank of canal from point west of bridge No. 143 to culvert No. 103, and road culvert at berme end of bridge No. 143 was restored.

Ditches west of bridge No. 153 and east of culvert No. 120 were cleaned out.

Two hundred and twenty-two feet of State ditch on Clinton street in city of Lockport, was cleaned out.

The inlet to culvert No. 98 and outlet of culvert No. 101 were cleaned, and 300 lineal feet of ditch cleaned on each side of culvert No. 102, and 600 feet of outlet ditch from said culvert.

## INDIAN RESERVATIONS.

*Chap. 578, Laws of 1907.*

## OIL SPRING RESERVATION.

Ditches and sluices were cleaned out, bridges on roads leading to spillway of reservoir were repaired, and portion of highway was gravelled.

## CATTARAUGUS RESERVATION.

A portion of the highway between the east line of the reservation and the Thomas Orphan asylum was gravelled, and ditches cleaned out.

The highway from Indian Four Corners to Versailles was gravelled; the road from Indian Four Corners to Collins and Gowanda was turnpiked about four miles; the highway from Lawtons to Irving was graded from east line of the town of Brant westerly, a distance of two miles, and the highway from Irving known as the Mile-Strip road, was graded from the east line of the reservation westward three and one-half miles.

## TONAWANDA RESERVATION.

Built road in the town of Alabama beginning at the south line of reservation, and running northerly for about one and one-half miles, through heavy cuts and fills. One tile culvert and two wooden sluices were also built. The Middle road was grubbed and cleared from the south line of reservation northerly a distance of two miles.

Old Scotland road was also grubbed and turnpiked in towns of Newstead and Alabama, from its intersection with Middle road to southwest line of reservation, and the sluice at the school-house was repaired.

## ALLEGANY RESERVATION.

Ruts were filled and gravel spread on roads in town of Elko; same in town of Cold Springs on highway beginning at Jemison's

and going north for one and one-half miles; same in town of South Valley, beginning at State line and going to Boone Run, a distance of four and one-half miles, and same in town of Red House, beginning at south end of town line and going north four miles.

Filled ruts and gravelled highway in town of Carrollton, beginning at Hoag's Corners and going to Ten Mile cut, a distance of two and one-half miles; also, cleaned out various ditches and sluices in towns of Red House, South Valley, Elko and Salamanca.

#### TUSCARORA RESERVATION.

National Woods road was grubbed and cleared and turnpiked a distance of three-fourths mile. The road was graded for three fourths mile on Black Nose hill, and a retaining wall was built.

Middle road on the hill between Mountain road and Mt. Hope road was graded for a distance of one mile.

North and South road on east line of reservation was graded for one and one-half miles, and North and South road on west line of reservation was turnpiked and repaired.

Sluices were built and bridges repaired on the following roads:

Six new sluices on Mt. Hope road; three new sluices on Mountain road; bridge abutment repaired and bridge replanked on North and South road; bridge abutment and sluice were repaired and bridge replanked at school house; three bridges were repaired and replanked, and two sluices refitted on Middle road; two sluices were rebuilt, one north and one south of Black Nose hill; one sluice was rebuilt near Thompson's residence, and one sluice rebuilt south of Thompson's.

#### WINTER SCHEDULE.

*Chap. 162, Laws of 1906.*

#### SECTION No. 11.

Piles were driven for protection of bulkhead gates in north end of Tonawada dam, and piles were also driven along berme bank of canal north of and near Germania Park bridge, to prevent sliding of embankment.

## BUILDING AND REPAIRING SCOWS.

## SECTION No. 9.

Two new scows were built in Western Division shops and Rochester State yard.

## SECTION No. 11.

Dump scow and scow "Erie" were remodeled; scow "Erie" had hull repaired and cabin built; dump scow had repairs made to deck and hull, and scow "Buffalo" was repaired with new rake timbers and deck.

Machinery of pile-driver was repaired; new crane built for dredge; new deck crane and siding put on scow "Sheahan," and derrick boat was converted into a clam-shell dredge.

## SECTION No. 8.

The culvert of lock No. 58 was repaired, concrete lining placed at lower end thereof and trunk sewer from State Institute at Newark was connected with upper end of same. Gates were inserted in lock No. 61.

A concrete wall was built across head of lock No. 60, and both sides of middle ground and upper end of culvert were repaired with concrete.

## SECTION No. 9.

The faces of a portion of berme lock No. 65 were trimmed off to give proper width of lock chamber.

## REPAIRS OF SLOPE AND VERTICAL WALLS.

## SECTION No. 8.

A concrete wall was built across entrance to Price's dry dock at Newark, and a concrete wall built at east end of Palmyra aqueduct, berme side.

Sixty-five feet of concrete wall was built on berme side of canal at culvert No. 7, in Clyde.

## SECTION No. 9.

A concrete wall, 40 feet in length, was built in towpath bank at Brighton in rear of Wheeler building.

One thousand two hundred and sixty-eight feet of vertical wall with cement coping thereon was built along front angle of towpath in the city of Rochester, extending from Smith street westerly.

## SECTION No. 10.

Six hundred and eight lineal feet of vertical wall was built along front angle of towpath in the village of Medina, and timber docking replaced thereon.

A new guard-rail was built along top of vertical towpath wall, in the city of Lockport, for a distance of 1,000 feet westerly from lock No. 71.

## SECTION No. 11.

A wooden draw-bridge was erected over Scajaquada creek, in the city of Buffalo.

## REPAIR OF BRIDGES.

## SECTION No. 8.

Bridges Nos. 34 and 41 were renewed, labor and materials provided under winter schedule.

## SECTION No. 10.

The west end of the berme abutment of bridge No. 121 was rebuilt, and approach to bridge improved.

## REPAIR OF CULVERTS.

## SECTION No. 8.

The berme end of culvert No. 10 and berme end of culvert No. 13 were taken down and relaid.



## SECTION No. 9.

Leak in culvert No. 47 repaired at towpath end by concreting arch of culvert and building cut-off wall.

## SECTION No. 10.

The waste weir at west end of bulkhead in Medina was reinforced with a wall of concrete.

## INDIAN RESERVATIONS.

*Chap. 466, Laws of 1908.*

## TONAWANDA RESERVATION.

A new bridge was built across the Judge road, one mile south of Oak Orchard feeder bulkhead.

The Middle road was turnpiked and graded for a distance of three-fourths mile northerly from the Peter Smith property, and two new vitrified pipe culverts were built under said road.

The road culvert across the Middle road, south of Charlotte Sundown's place, was rebuilt, and a new vitrified pipe culvert was inserted across said road.

The road culvert opposite the property of Amos Snyder was cleaned out and repaired.

Road bridge No. 1 on the Judge road, south of Oak Orchard creek feeder, was rebuilt, and its approaches were graded.

The first road bridge on the road south from the "Farm School" was rebuilt with new materials, and its approaches graded.

Road bridge No. 2 on road south from said "Farm School" was also rebuilt of new materials, and approaches graded.

## OIL SPRING RESERVATION.

The main road through the reservation was graded and gravelled, and the washout on the North and South road at a point south of the reservoir was repaired.

## CATTARAUGUS RESERVATION.

At point of washout of highway between Lawtons and Irving, brush mattresses were erected and filled with gravel, for a distance of 350 feet, sluices were constructed, and guard-rails constructed along edge of roadway for 380 feet, next to Clear creek, in the town of Collins.

Chords and posts of wooden bridge No. 1, over Clear creek, were strengthened, and a break-water 16 feet long was built on the south side of Clear creek bridge No. 1.

Versailles bridge was cleaned, sidewalks repaired, and new planks put in roadway of same.

Bearing and anchor piles were placed in dike at west end of Clear creek bridge No. 2.

The road extending from Lawtons to Irving was turnpiked for one and one-half miles northwesterly from the south line of the town of Brant, gravel was put on said road east of Clear creek bridge No. 2, and a wooden box culvert put under said road east of the yellow schoolhouse.

## ALLEGANY RESERVATION.

A wooden culvert was built under road leading from Carrollton to Vandalia at a point one-fourth mile east of Nine-Mile creek, and the sluice west of Vandalia bridge was repaired.

The main road between Carrollton and Vandalia was graded for about four miles, brush along sides of road removed, and road gravelled from schoolhouse to Vandalia town line.

In the town of Redhouse, the road culvert approaches west of Hoag's property were filled in and brush removed from creek. The main road between Salamanca and Onoville was cleared of brush and turnpiked.

In the town of Elko, Quaker bridge approaches and wooden road culvert were repaired.

In the town of Cold Spring, road culvert on Krouse property, bridge over Robinson's run, and bridge over Cold Spring creek were repaired.

In the town of South Valley, the bridge crossing Pearce's run was repaired, and obstructions removed from the creek. The bridge over Boone run was repaired, and the timber bridge crossing Jug Point run between Onoville and State line was repaired.

*Tuscarora Reservation.*

The Mt. Hope road was improved by grading and cutting brush on same for a distance of four and one-half miles, and by repairs to bridge and approaches north of the schoolhouse.

## PAINTING BRIDGES.

*Chap. 171, Laws of 1907.*

Summer Schedule, 1908.

## SECTION No. 8.

Bridges Nos. 6, 13, 36, 41 and guard rails; also bridge over old canal at east line of Wayne county, were painted.

## SECTION No. 10.

Bridges Nos. 142, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 159, 166 and 167 were painted.

## SECTION No. 11.

Bridges Nos. 169, 170, 171, 172, 173, 174, 175½ and 176 were painted.

*Grading Towpath.*

## SECTION No. 10.

The towpath was graded with cinders at various points between Albion and Lockport.

## SECTION No. 11.

The towpath was cindered between Bush's bridge and Tonawanda; between Tonawanda and Grand Island ferry, and between Hudson and Commercial streets.

*Sheet-piling.*

## SECTION No. 9.

Sheet-piling was driven in the towpath in the vicinity of old canal bridge No. 48 for an aggregate distance of 200 lineal feet.

*Guard Rails.*

## SECTION No. 10.

Guard rails on bridge approaches were rebuilt or repaired at all bridges from No. 137 to No. 157.

OSCAR H. PEACOCK,  
*Assistant Superintendent.*

ITEMIZED REPORT OF EXPENDITURES BY OSCAR H. PEACOCK, ASSISTANT SUPERINTENDENT OF PUBLIC WORKS, FOR ORDINARY REPAIRS ON THE WESTERN DIVISION, ERIE CANAL, DURING FISCAL YEAR ENDED SEPTEMBER 30, 1908.

ITEMS.	W. D. office.	W. D. Erie.	Section No. 8.	Section No. 9.	Section No. 10.	Section No. 11.	Totals.
Salary, clerks, stenographer and janitress.....	\$3,696 00	\$19,983 61	\$2,845 78	\$12,221 15	\$13,168 28	\$10,105 78	\$33,696 00
Labor, special agents, foremen, etc.....	.....	3,249 08	2,878 78	7,581 25	6,051 83	6,446 42	58,324 60
Lumber.....	.....	505 50	144 87	168 31	108 24	914 47	26,207 36
Coal.....	.....	147 57	478 89	500 08	659 10	596 27	1,841 39
Hardware.....	7 25	473 50	242 75	1,613 16	1,761 13	652 50	2,382 00
Machinists' work.....	.....	16 80	103 50	441 85	115 43	5 10	4,750 29
Stone, cement, sand, etc.....	.....	31 97	105 17	148 97	161 45	169 35	682 68
Telegraph and telephone.....	522 97	267 17	.....	68 50	162 22	12 08	1,139 88
Gas and electric light and power.....	58 07	90 61	43 18	46 20	205 16	38 46	1,568 04
Boat and office furniture.....	1 90	.....	88 57	245 50	984 00	.....	425 51
Rent and use of tools.....	71 34	10 30	.....	33 40	19 50	.....	1,318 07
Stationery.....	.....	240 69	30 15	.....	.....	9 79	82 39
Freight, cartage and towing.....	.....	.....	.....	553 82	372 23	136 95	333 53
Postage.....	114 50	230 40	335 65	193 48	9 00	250 34	1,114 50
Expense, traveling, etc.....	6 00	58 96	77 88	89 58	.....	.....	1,635 05
Ship chandlery.....	.....	222 43	85 87	273 48	346 39	21 50	589 66
Castings.....	.....	244 66	.....	117 91	483 15	364 25	397 88
Boat repairs.....	.....	824 06	126 00	439 86	7 95	60 19	641 37
Rubber goods, etc.....	.....	.....	.....	.....	.....	.....	718 75
Paints and oils.....	.....	.....	.....	.....	.....	.....	928 42
New tools and machinery.....	.....	.....	.....	.....	.....	.....	1,332 06
Totals.....	\$4,478 03	\$26,666 37	\$7,587 04	\$24,788 69	\$24,673 55	\$19,915 75	\$108,109 43

## SPECIAL APPROPRIATIONS.

ITEMIZED REPORT of expenditures by Oscar H. Peacock, Assistant Superintendent of Public Works, on Western Division of New York State canals, during the fiscal year ended September 30, 1908.

DESCRIPTION OF WORK.	Chap- ter.	Laws of	Item.	Para- graph.	Sec. No. or location.	Labor.	Lumber.	Rent of tools, etc.	Machin- ery, hardware, etc.	Stone, cement, etc.	Totals.	Sum- mary.
Ditching, Sec. No. 8.....	578	1907	1	23, 10	Sec. 8.....	\$2,484 25	.....	\$32 50	.....	.....	\$2,516 75	
Ditching, Sec. No. 9.....	578	1907	1	.....	Sec. 9.....	2,222 25	.....	275 07	.....	\$130 80	2,628 12	
Ditching, Sec. No. 10.....	578	1907	1	.....	Sec. 10.....	1,826 75	.....	22 75	\$46 40	9 20	1,904 19	
Repairing roads, etc., on Oil Spring Indian Reservation.....	578	1907	.....	.....	Cuba Res. Lawtons.....	\$200 03	.....	.....	.....	.....	\$200 03	
Repairing roads, etc., Cattaraugus Indian Reservation.....	578	1907	.....	.....	Jardine Middle and Scotland roads.....	1,973 00	\$8 57	.....	.....	\$7 10	1,988 67	
Repairing roads, etc., Tonawanda Indian Reservation.....	578	1907	.....	.....	Salamanca, etc.....	2,148 13	24 40	\$89 50	.....	20 80	2,282 83	
Repairing roads, etc., Allegany Indian Reservation.....	578	1907	.....	.....	.....	962 39	137 81	.....	.....	.....	1,100 20	
Repairing roads, etc., Tuscarora Indian Reservation.....	578	1907	.....	.....	.....	708 25	82 60	.....	\$4 08	.....	794 83	
File driving, Sec. No. 11.....	162	1906	10	19, 20	Sec. 11.....	\$338 20	\$277 80	\$14 80	.....	.....	\$628 80	6,366 66
Building and repairing boats, scows.....	162	1906	6	11	Sec. 9.....	\$2,195 88	\$46 20	.....	\$204 20	.....	\$2,466 28	628 80
Building and repairing boats, scows.....	162	1906	6	.....	Sec. 11.....	5,822 06	511 43	\$54 75	1,032 68	.....	7,420 92	
Repairs to locks, Sec. No. 8.....	162	1906	3, 5	.....	Locks 53, 55, 60.....	\$1,639 30	\$118 40	.....	\$15 01	\$70 00	\$1,842 71	9,887 20
Repairs, trimming lock, Sec. 9.....	162	1906	.....	.....	Lock 65.....	\$1,294 00	.....	.....	.....	.....	\$1,294 00	
Repairs slope and vertical walls.....	162	1906	14, 3	1, 5, 6, 12	Sec. 8.....	\$537 88	\$67 83	.....	.....	\$316 21	\$921 92	2,126 71
Repairs slope and vertical walls.....	162	1906	1	2, 10, 12	Sec. 9.....	2,677 49	37 76	.....	\$1 90	1,005 16	3,722 31	
Repairs slope and vertical walls.....	162	1906	.....	.....	Sec. 10.....	906 41	.....	.....	.....	.....	906 41	
Scajquada Creek Bridge.....	162	1906	.....	.....	Sec. 11.....	\$562 00	\$222 24	\$6 00	\$18 01	.....	\$838 25	5,550 64
Erecting guard rail, Lockport.....	162	1906	9	18	Sec. 10.....	\$1,079 42	\$766 55	\$15 25	\$99 12	.....	\$1,960 34	838 25
												1,960 34

162	1906	5	9	Sec. 8	\$248 25	\$388 60	\$3 13	\$3 15	\$4 00	\$636 85
162	1906	7	15, 14	Sec. 10	171 60					181 88
Renewing bridges Nos. 34 and 41.										
162	1906	2	3	Sec. 8	\$248 13	\$10 06	\$24 70		\$16 30	\$299 19
162	1906	2	13	Sec. 9	1,523 71	103 11			153 60	1,360 42
Repairs of culverts.										
162	1906	1	6	Sec. 8	\$185 26	\$73 70			\$60 00	\$318 96
Repairs Palmyra aqueduct.										
162	1906	8	16, 10	Sec. 10	\$61 40	\$41 53		\$4 65	\$30 63	\$141 21
Repairs Waste Weir and bulkhead, Medina.										
162	1906			Sec. 9	\$8,483 08	\$2,233 77	\$3,511 73	\$66 43	\$97 80	\$15,023 41
Repairing break at bridge No. 48.										
466	1908				\$2,521 37	\$410 87	\$176 50	\$16 86	\$35 40	\$3,161 00
466	1908				200 00					200 00
466	1908				1,738 43	165 22	116 13			2,019 78
466	1908				1,757 49	111 86	1 66	1 94		1,872 95
466	1908				148 50	1 63				150 13
Repairs roads, etc., Tuscarora Indian Reservation.										
Summer Schedule.										
171	1907	2	2	Sec. 8	\$92 00					\$92 00
171	1907	1	14	Sec. 10	451 75					451 75
171	1907	2	6	Sec. 11	410 82					410 82
Painting bridges.										
171	1907	1	15	Sec. 10	\$112 04					\$112 04
171	1907	1	17	Sec. 11	1,705 95					1,705 95
Grading towpath.										
171	1907	4	13	Sec. 10	\$488 50					\$488 50
Guard rails for bridges.										
171	1907	3	8	Sec. 9	\$254 12	\$56 00				\$310 12
Sheet-piling, towpath.										
Total of special appropriations.										
					\$48,908 69	\$5,920 94	\$4,344 47	\$2,143 52	\$1,957 00	\$63,334 62

ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on section 8 of the Erie canal, under the charge of R. A. Vanderboget, superintendent of repairs, during the 366 days ended September 30, 1908.

STRUCTURES OR WORKS, ETC.	Whole number on section.	Total cost of repairs, new and old.
Locks.....	9	\$1,181 31
Lock-tending (exclusive of oil).....		17,183 46
Aqueducts.....	2	.....
Waste-weirs.....	3	.....
Culverts.....	24	.....
Farm bridges (wood).....	6	2,262 45
Farm bridge (iron).....	1	
Road bridges (wood).....	10	
Road bridges (iron).....	22	
Tow-path bridges (wood).....	3	
Tow-path bridges (iron).....	3	29 00
State scows.....	2	
Small boat.....	1	.....
Ice breaker.....	1	55 00
Lock-houses.....	9	.....
Store-houses.....	2	.....
Raising and repairing tow-path and berme bank, not including repairs to slope walls.....		658 22
Cleaning out bottom of canal during spring repairs.....		1,180 50
Slope wall.....		788 80
Docking.....		913 68
Breaking ice and assisting boats in consequence of ice.....		197 94
Watching canal.....		2,174 19
Other miscellaneous expenditures.....		567 40
Other work of consequence which does not come under any of the above heads, viz.:		
Mowing weeds.....		1,232 67
Setting snubbing posts.....		596 51
Graveling bridge approaches.....		584 91
Painting bridges.....		739 41
Disbursing clerk.....		637 50
Filing and publication.....		51 86
Total.....		\$31,034 81

## REPAIRS AND IMPROVEMENTS.

*Locks and Lock Gates.*

During spring repairs all locks and lock gates were put in good repair. New gates have been put in as follows: lock No. 53, two lower gates; lock No. 55, two lower gates; lock No. 58, two lower gates; lock No. 61, two lower gates. New balance beams were placed on locks as follows: two on lock No. 60, two on lock No. 61, one on lock No. 59, one on lock No. 58, two on lock No. 57, one on lock No. 56, one on lock No. 55 and one on lock No. 53. Two new foot bridges have been placed on lock No. 60.

*Bridges.*

Bridges Nos. 36 and 41 were replaced by new structures; bridges Nos. 4, 25 and 41 have been replanked; spliced lower chords and put in two No. 1 braces on bridges Nos. 7 and 12. All bridges over the section have had their floors repaired and new needle beams and joists have been put in where needed; 1,700 feet of sidewalk has been laid on approaches to bridges Nos. 5, 16, 15, 17 and 24; all bridges on the section have been painted.

*Docking.*

There has been framed and laid about 3,600 lineal feet of docking at different points over the section.

*Slope and Vertical Walls.*

During spring repairs all slope and vertical walls on the section were repaired where found necessary, about 2,000 feet of slope wall on the berme bank between culvert No. 12 and bridge No. 8 was relaid, and bank strengthened.

*Towpath.*

Considerable work has been done in the way of raising, repairing and strengthening the towing-path; by the use of the scraper it has been kept in excellent condition.



*Cleaning Prism.*

Bars were removed during spring repairs, and thus far no trouble from this cause has occurred along the section.

*Cutting Brush.*

During the season all weeds and brush were cut on towing-path and berme embankments over the entire section.

*Recommendations.*

The vertical wall for a distance of fifty feet east of culvert No. 7 should be taken down and relaid in cement as it has leaked quite badly all the season. Bridges No. 7 and No. 12 should be replaced by new structures as they are unsafe in their present condition. Waste weirs No. 1 and No. 2 need quite extensive repairs, as they are leaking considerably. Pier on lock No. 60 will have to be rebuilt. Lock No. 55 requires new apron, as the planking is all gone. Extensive repairs must be made to Palmyra and Lyons aqueducts before opening of navigation by putting in new stringers and replanking their bottoms.

R. A. VANDERBOGET,  
*Superintendent.*

ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on section 9 of the Erie canal, under the charge of George A. Goss, superintendent of repairs, during the 366 days ended September 30, 1908.

STRUCTURES OR WORKS, ETC.	Whole number on section.	Total cost of repairs, new and old.
Double locks, repairs.....	5	\$109 73
Lock-tending (exclusive of oil).....		9,682 25
Bridge-tending.....		5,041 51
Stop-gates, repairs.....	3	49 41
Aqueduct, repairs.....	1	48 99
Waste-weirs, repairs.....	7	5 00
Culverts, repairs.....	32	17 33
Weigh-lock.....	1	.....
Farm bridges (wood).....	*78	917 95
Farm bridges (iron).....		
Road bridges (wood).....		
Road bridges (iron).....		
Tow-path bridges (wood).....		
Tow-path bridges (iron).....		
State scows, repairs.....	2	.....
Repairs to sheet-piling.....		241 75
Ice breakers, assisting boats.....	2	114 05
Bridge and lock-houses.....	11	.....
Watch-houses.....	5	.....
Moving material.....		427 24
Sorting and piling lumber in State yard..		246 63
Raising and repairing tow-path and berme bank, not including repairs to slope walls.....		2,051 06
Cleaning out bottom of canal during spring repairs.....		1,732 50
Mowing weeds.....		1,770 64
Vertical and slope wall repairs.....		407 10
Ditching on three-mile level.....		147 52
Repairs of breaches.....		497 20
Watching canal.....		3,237 08
Diving for stone in canal.....		3 00
Other work of consequence which does not come under any of the heads, viz.:		
Disbursing clerk, salary.....		637 50
Publishing abstracts.....		56 10
Filing abstract.....		2 79
Grand total.....		\$27,444 33

\* Including foot bridges.

## REPAIRS AND IMPROVEMENTS.

Culvert 35 has leaked around the west wing, on towpath side, most of the summer; while it may not be dangerous, I think it would be well to have it thoroughly examined while the water is out of the canal, and such repairs as are required, made before the opening of navigation in 1909.

The wall on towpath side between bridge 59 and bridge 60 is in bad condition; the foundation has given out, and the wall has slid in many places. This wall ought to be rebuilt before the opening of navigation next spring.

The wall on towpath side, commencing just west of bridge 63, running east for about 300 feet, has caused considerable trouble by falling into the canal. This wall should be rebuilt as it is continually falling at different places and is liable to interfere with navigation.

About 75 feet of wall on berme side at Whitney's elevator in the city of Rochester, just west of bridge 81, has fallen into the canal; this wall should be rebuilt.

The wall on towpath side between bridges 83 and 84, for a distance of 1,000 feet, being a continuance of wall rebuilt last spring is in bad condition and should be rebuilt.

The wing walls of culverts 60 and 61 are in bad condition and should be rebuilt.

Three boats sunk on section during the season: The James S. Slatterly, loaded with lumber; H. M. Claffin, loaded with stone, and the C. H. Goodan, loaded with stone. Each boat was assisted and water pumped out by State pump.

GEORGE A. GOSS,  
*Superintendent.*

ANNUAL REPORT, *showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on section 10 of the Erie canal, under the charge of Charles L. Papworth, superintendent of repairs, during the 112 days ended January 20, 1908.*

STRUCTURES OR WORKS, ETC.	Whole number on section.	Cost of repairs, old, etc.
Locks.....	6	\$459 29
Lock-tending (exclusive of oil).....		2,732 41
Lock-gates.....	24	.....
Aqueducts.....	1	92 32
Waste-weirs.....	10	18 45
Culverts.....	66	180 20
Road bridges (wood).....	3	} 615 58
Road bridges (iron).....	54	
State scows and pump boats.....	3	38 00
Small boats.....	2	.....
Lock-houses.....	1	.....
Work-shops.....	2	.....
Repairing Medina feeder.....		110 77
Timber-sheds.....	3	.....
Raising and repairing tow-path and berme bank, not including repairs to slope walls.....		848 36
Repairing vertical wall, Albion.....		74 69
Docking.....		489 50
S. S. guard lock.....		67 50
Watching canal.....		1,068 39
Repairing gates in bulkhead.....		48 50
Other work of consequence which does not come under any of the above heads, viz.:		
Boating, sorting and piling lumber.....		303 81
Pumping sunken boat.....		24 75
Breaking ice and assisting boats.....		56 00
Tending Albion swing bridge.....		278 71
Disbursing clerk.....		187 50
Regulating water.....		266 13
Publishing and filing abstracts.....		15 33
Total.....		\$7,976 19

ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on section 10 of the Erie canal, under the charge of Frank B. Seeley, superintendent of repairs, during the 63 days ended March 23, 1908.

STRUCTURES OR WORKS, ETC.	Whole number on section.	Cost of repairs of old, etc.
Locks.....	6	.....
Lock-gates.....	24	.....
Aqueducts.....	1	.....
Waste-weirs.....	10	.....
Culverts.....	66	.....
Road bridges (wood).....	3	.....
Road bridges (iron).....	54	.....
State scows and pump boats.....	3	.....
Small boats.....	2	.....
Lock-houses.....	1	.....
Work-shops.....	2	.....
Timber-sheds.....	3	.....
Other work of consequence which does not come under any of the above heads, viz.:		
Regulating water.....		\$50 00
Taking inventory.....		9 00
Cutting ice waste-weir No. 21.....		3 37
Cleaning sidewalks on bridges in Lockport.....		18 00
Publishing and filing abstracts.....		1 51
Total.....		\$81 88

ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on section 10 of the Erie canal, under the charge of Chas. L. Papworth, superintendent of repairs, during the 181 days ended September 30, 1908.

STRUCTURES OR WORKS, ETC.	Whole number on section.	Cost of repairs of old, etc.
Locks.....	6	\$314 20
Lock-tending (exclusive of oil).....		6,061 45
Lock-gates.....	24	.....
Aqueducts.....	1	17 68
Waste-weirs.....	10	.....
Culverts.....	66	.....
Road bridges (wood).....	3	} 2,263 19
Road bridges (iron).....	54	
State scows and pump boats.....	3	42 80
Small boats.....	2	47 10
Lock-houses.....	1	.....
Work-shops.....	2	.....
Timber-sheds.....	3	.....
Raising and repairing tow-path and berme bank, not including repairs to slope walls.....		1,795 66
Docking.....		1,317 81
Repairs of leaks.....		17 47
Watching canal.....		2,352 26
Other work of consequence which does not come under any of the above heads, viz.:		
Stop gates.....		36 14
Disbursing clerk.....		375 00
Regulating water.....		550 00
Watching State property.....		225 00
Watching S. S. guard lock and O. O. cr. feeder.....		100 00
Tending Albion swing bridge.....		584 51
Publishing and filing reports.....		25 55
Inspecting work on section and pumping sunken boats.....		75 30
Cutting weeds and brush.....		935 03
Boating material.....		70 71
Total.....		\$17,206 86

## REPAIRS AND IMPROVEMENTS.

During the past season navigation has not been interrupted. No breaks have occurred.

The bridges have received careful attention; bridge No. 129, having been condemned, was removed. I recommend that a new structure take its place. Chapel street lift bridge, No. 158, at this time is receiving general repairs. A large amount of docking was placed between combined locks and Sulphur Spring guard lock and other places where needed. More will be needed.

Considerable work has been done on towpath which is now in fair condition.

Much of the vertical wall between the combined locks at Lockport, and Sulphur Spring guard lock, also between bridge No. 156 and 157 should be relaid before the opening of navigation, 1909.

Provisions should be made for the removal of loose rock, on edge of rock cut, on berme side of canal, between bridges No. 163 and 166 as it is constantly falling into the canal.

It might be well to have racks placed in front of waste-weir gates, to avoid flood wood and brush from interfering with the operation of said gates.

Necessary repairs have been made to locks, waste-weirs, aqueduct and structures.

Weeds and brush have been cut on entire section.

CHAS. L. PAPWORTH,  
*Superintendent.*

ANNUAL REPORT, showing the name and number of structures or works, the different heads of expenditures, and the cost of each, on section 11 of the Erie canal, under the charge of W. J. Hingston, superintendent of repairs, during the 366 days ended September 30, 1908.

STRUCTURES OR WORKS, ETC.	Whole number on section.	Total cost of repairs new and old.
Locks.....	3	.....
Lock-tending (exclusive of oil).....		\$6,063 73
Bridge tending.....		3,237 10
Foreman.....		1,200 00
Disbursing clerk.....		900 00
Harbor master.....		1,080 00
Bank watch.....		1,374 84
Watching State property.....		960 00
Farm bridges (wood).....	52	.....
Farm bridges (iron).....	33	.....
Road bridges (wood).....	2	.....
Road bridges (iron).....	29	.....
Tow-path bridges (wood).....	2	.....
Tow-path bridges (iron).....	5	.....
General repairs between Buffalo and Tonawanda.....		4,292 02
General repairs between Tonawanda and Pendleton.....		3,886 82
Driving piles, building locks, laying timber, etc.....		4,826 61
Tending flood gates, cleaning snow and ice from bridges on section.....		576 88
Publishing abstract.....		46 00
Janitress.....		48 00
Total.....	.....	\$28,492 00



## REPAIRS AND IMPROVEMENTS.

Nothing occurred to cause delay to navigation during the past year. All necessary repairs were made to bridges, roadways and approaches. The towpath was kept in excellent condition, as were also the locks and lock houses, the lock house at the sloop lock was in a tumble down condition, it was rebuilt and repainted and nineteen snubbing posts were placed around this lock, and the westerly entrance improved by driving piles and sheet piling and filling in with clay, thus making a safe guide for boats entering lock. The dock at the entrance to Scajaquada creek was rebuilt, also a new foundation for Scajaquada Creek bridge, 150 lineal feet of timber docking 4 feet in height was built at Hertel Avenue bridge. Spring piles were driven at entrance to Commercial slip and new fenders placed on the abutment of Commercial slip bridge. The dock known as the long dock between Main and Delaware streets, Tonawanda, was removed last fall and rebuilt at the time of the opening of navigation. The reason for its removal being to allow free passage to the ice during the spring freshets. The spillway at Tonawanda was strengthened by riprapping with large stone. A bad leak was found to be draining water from the canal into the Niagara river between the railroad bridge and the dam, the same was repaired by digging down to the leak and filling in with clay. Four new bridges and three culverts were built between Tonawanda and Pendleton. A great deal of attention has been paid to the repairs to vertical wall in Tonawanda creek. The tugs employed in contract work causing it to slide out in many places. The paddles of the river lock at Tonawanda were repaired and new railing placed on gates, and a concrete wall was built on both sides of the entrance from the canal to lock for the purpose of stopping the overflow which occurred when the water was high. About four thousand lineal feet of docking timber was laid between the Black Rock lock and Hudson street, and about four hundred feet at Tonawanda. All boats on this section were repaired and painted when necessary, and all grass and weeds were cut from towpath and berme bank in the months of June and September.

W. J. HINGSTON,  
*Superintendent.*

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# TABLES

ACCOMPANYING THE

Annual Report of the Superintendent of  
Public Works.

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TABLE

*Exhibiting the date of the opening and closing of the Hudson river, and the number of days open; also, the time of commencement and close of each navigable season of canals, and the number of days of navigation since 1824; also, the date of the opening of Lake Erie since 1827.*

OPENING AND CLOSING OF THE HUDSON RIVER.			COMMENCEMENT AND CLOSE OF NAVIGATION.			Opening of the lake.
River open.	River closed.	Days open.	Canal open.	Canal closed.	Navigable days.	
March 3, 1824.....	January 5, 1824.....	309	April 30, 1824.....	December 4, 1824.....	219	.....
March 6, 1825.....	December 13, 1825.....	283	April 12, 1825.....	December 5, 1825.....	238	.....
February 25, 1826.....	December 13, 1826.....	302	April 25, 1826.....	December 18, 1826.....	243	.....
March 20, 1827.....	November 25, 1827.....	251	April 27, 1827.....	December 18, 1827.....	241	April 21, 1827
February 8, 1828.....	December 23, 1828.....	230	March 27, 1828.....	December 20, 1828.....	269	April 1, 1828
April 1, 1829.....	January 14, 1829.....	286	May 2, 1829.....	December 17, 1829.....	230	May 10, 1829
March 15, 1830.....	December 6, 1830.....	283	April 30, 1830.....	December 17, 1830.....	242	May 5, 1830
March 15, 1831.....	December 6, 1831.....	282	April 16, 1831.....	December 1, 1831.....	230	May 8, 1831
March 25, 1832.....	December 31, 1832.....	289	April 25, 1832.....	December 12, 1832.....	241	May 27, 1832
March 21, 1833.....	December 31, 1833.....	277	April 9, 1833.....	December 12, 1833.....	238	April 23, 1833
February 29, 1834.....	December 15, 1834.....	291	April 17, 1834.....	December 12, 1834.....	240	April 6, 1834
March 25, 1835.....	November 30, 1835.....	268	April 15, 1835.....	November 30, 1835.....	230	May 8, 1835
April 4, 1836.....	December 7, 1836.....	244	April 25, 1836.....	November 26, 1836.....	216	May 16, 1836
March 27, 1837.....	December 14, 1837.....	261	April 20, 1837.....	December 9, 1837.....	234	May 16, 1837
March 19, 1838.....	November 25, 1838.....	257	April 11, 1838.....	December 25, 1838.....	228	March 31, 1838
March 25, 1839.....	November 18, 1839.....	286	April 20, 1839.....	December 16, 1839.....	241	April 11, 1839
February 25, 1840.....	November 8, 1840.....	285	April 20, 1840.....	December 30, 1840.....	228	April 27, 1840
March 24, 1841.....	November 9, 1841.....	286	April 24, 1841.....	November 30, 1841.....	221	April 14, 1841
February 4, 1842.....	November 28, 1842.....	308	April 20, 1842.....	November 28, 1842.....	222	March 7, 1842
April 13, 1843.....	December 10, 1843.....	242	May 1, 1843.....	November 28, 1843.....	214	May 6, 1843
March 18, 1844.....	December 17, 1844.....	278	April 18, 1844.....	November 26, 1844.....	222	March 14, 1844
February 24, 1845.....	December 3, 1845.....	283	April 15, 1845.....	November 26, 1845.....	228	April 3, 1845
March 18, 1846.....	December 14, 1846.....	275	April 16, 1846.....	November 25, 1846.....	234	April 11, 1846
April 7, 1847.....	December 25, 1847.....	263	May 1, 1847.....	November 30, 1847.....	214	April 23, 1847
March 22, 1848.....	December 27, 1848.....	292	May 1, 1848.....	December 9, 1848.....	223	April 9, 1848
March 19, 1849.....	December 26, 1849.....	286	May 1, 1849.....	December 5, 1849.....	219	March 25, 1849
March 10, 1850.....	December 17, 1850.....	282	April 15, 1850.....	December 11, 1850.....	234	March 25, 1850
February 25, 1851.....	December 14, 1851.....	293	April 15, 1851.....	December 5, 1851.....	235	March 2, 1851
March 28, 1852.....	December 23, 1852.....	270	April 20, 1852.....	December 15, 1852.....	239	April 20, 1852

March	23, 1853	.....	December 21, 1853	.....	20, 1853	.....	December 3, 1854	.....	245	April	14, 1853
March	27, 1854	.....	December 26, 1854	.....	1, 1854	.....	December 10, 1854	.....	217	April	28, 1854
March	27, 1855	.....	December 26, 1855	.....	1, 1855	.....	December 10, 1855	.....	224	April	21, 1855
April	17, 1856	.....	December 14, 1856	.....	5, 1856	.....	December 10, 1856	.....	214	May	27, 1856
February	27, 1857	.....	December 17, 1857	.....	6, 1857	.....	December 15, 1857	.....	223	April	27, 1857
March	27, 1858	.....	December 17, 1858	.....	28, 1858	.....	December 18, 1858	.....	225	April	15, 1858
March	13, 1859	.....	December 10, 1859	.....	15, 1859	.....	December 12, 1859	.....	242	April	17, 1859
March	13, 1860	.....	December 14, 1860	.....	15, 1860	.....	December 12, 1860	.....	232	April	17, 1860
March	5, 1861	.....	December 13, 1861	.....	25, 1861	.....	December 10, 1861	.....	224	April	15, 1861
April	5, 1862	.....	December 19, 1862	.....	1, 1862	.....	December 10, 1862	.....	224	April	15, 1862
April	3, 1863	.....	December 13, 1863	.....	1, 1863	.....	December 9, 1863	.....	223	April	3, 1863
March	31, 1864	.....	December 12, 1864	.....	30, 1864	.....	December 8, 1864	.....	223	April	13, 1864
March	22, 1865	.....	December 12, 1865	.....	1, 1865	.....	December 12, 1865	.....	226	April	28, 1865
March	20, 1866	.....	December 15, 1866	.....	1, 1866	.....	December 12, 1866	.....	226	April	28, 1866
March	26, 1867	.....	December 8, 1867	.....	6, 1867	.....	December 20, 1867	.....	229	April	21, 1867
March	24, 1868	.....	December 5, 1868	.....	6, 1868	.....	December 7, 1868	.....	217	April	19, 1868
April	5, 1869	.....	December 9, 1869	.....	10, 1869	.....	December 10, 1869	.....	218	May	1, 1869
March	31, 1870	.....	December 17, 1870	.....	6, 1870	.....	December 8, 1870	.....	213	May	16, 1870
March	12, 1871	.....	November 29, 1871	.....	24, 1871	.....	December 1, 1871	.....	220	April	1, 1871
April	7, 1872	.....	December 2, 1872	.....	13, 1872	.....	December 1, 1872	.....	220	May	6, 1872
April	16, 1873	.....	November 22, 1873	.....	13, 1873	.....	December 5, 1873	.....	205	April	18, 1873
March	19, 1874	.....	December 12, 1874	.....	5, 1874	.....	December 5, 1874	.....	215	April	18, 1874
April	13, 1875	.....	November 29, 1875	.....	18, 1875	.....	Nov. 30, 1875 (by ice)	.....	297	May	12, 1875
April	1, 1876	.....	December 31, 1876	.....	4, 1876	.....	December 1, 1876	.....	211	May	4, 1876
March	30, 1877	.....	December 31, 1877	.....	8, 1877	.....	December 7, 1877	.....	214	April	17, 1877
March	14, 1878	.....	December 30, 1878	.....	15, 1878	.....	December 7, 1878	.....	237	March	24, 1878
April	4, 1879	.....	December 20, 1879	.....	8, 1879	.....	December 6, 1879	.....	212	April	19, 1880
March	5, 1880	.....	November 25, 1880	.....	20, 1880	.....	Nov. 21, 1880 (by ice)	.....	216	March	19, 1880
March	21, 1881	.....	December 2, 1881	.....	17, 1881	.....	December 8, 1881	.....	206	May	1, 1881
March	8, 1882	.....	January 5, 1882	.....	11, 1882	.....	December 7, 1882	.....	241	March	26, 1882
March	29, 1883	.....	December 15, 1883	.....	6, 1883	.....	December 1, 1883	.....	208	May	4, 1883
March	25, 1884	.....	December 19, 1884	.....	6, 1884	.....	December 1, 1884	.....	209	April	25, 1884
April	7, 1885	.....	December 3, 1885	.....	11, 1885	.....	December 1, 1885	.....	205	May	25, 1885
March	30, 1886	.....	December 7, 1886	.....	1, 1886	.....	December 1, 1886	.....	214	April	25, 1886
April	6, 1887	.....	December 28, 1887	.....	10, 1887	.....	December 1, 1887	.....	209	April	17, 1887
April	7, 1888	.....	December 14, 1888	.....	10, 1888	.....	December 3, 1888	.....	208	April	14, 1888
Open entire year	.....	.....	Open all winter	.....	.....	.....	November 30, 1889	.....	214	April	10, 1889
March	24, 1891	.....	December 2, 1890	.....	28, 1890	.....	November 30, 1890	.....	217	March	31, 1890
April	1, 1892	.....	December 24, 1891	.....	5, 1891	.....	December 5, 1891	.....	215	April	13, 1891
April	1, 1893	.....	December 22, 1892	.....	1, 1892	.....	December 5, 1892	.....	215	April	10, 1892
March	18, 1894	.....	December 6, 1893	.....	3, 1893	.....	November 30, 1893	.....	212	April	10, 1893
April	2, 1895	.....	December 24, 1894	.....	1, 1894	.....	November 30, 1894	.....	214	April	28, 1894
April	7, 1896	.....	December 19, 1895	.....	3, 1895	.....	December 5, 1895	.....	216	April	4, 1895
April	23, 1897	.....	December 19, 1896	.....	1, 1896	.....	December 1, 1896	.....	215	April	19, 1896
April	13, 1898	.....	December 7, 1897	.....	8, 1897	.....	December 1, 1897	.....	217	April	6, 1897
April	17, 1899	.....	December 13, 1898	.....	7, 1898	.....	December 10, 1898	.....	208	March	25, 1898
April	9, 1900	.....	December 15, 1899	.....	25, 1899	.....	December 1, 1899	.....	220	April	28, 1899
March	28, 1901	.....	December 11, 1900	.....	25, 1900	.....	December 1, 1900	.....	220	April	22, 1900
		.....	December 8, 1901	.....	7, 1901	.....	November 30, 1901	.....	207	April	20, 1901

*Table exhibiting the date of the opening and closing of the Hudson river, etc.—(Concluded).*

OPENING AND CLOSING OF THE HUDSON RIVER.			COMMENCEMENT AND CLOSE OF NAVIGATION.				Opening of the lake.
River open.	River closed.	Days open.	Canal open.	Canal closed.	Navigable days.		
March 17, 1902.....	December 8, 1902.....	266	April 24, 1902.....	December 4, 1902.....	224	April 9, 1902	
March 14, 1903.....	December 2, 1903.....	263	May 2, 1903.....	November 28, 1903.....	210	April 6, 1903	
April 4, 1904.....	December 4, 1904.....	244	May 5, 1904.....	November 28, 1904.....	205	May 10, 1904	
April 3, 1905.....	December 15, 1905.....	257	May 4, 1905.....	November 28, 1905.....	209	April 22, 1905	
March 22, 1906.....	December 5, 1906.....	260	May 2, 1906.....	November 28, 1906.....	211	April 15, 1906	
March 29, 1907.....	December 6, 1907.....	253	May 1, 1907.....	December 10, 1907.....	224	April 6, 1907	
March 23, 1908.....	December 18, 1908.....	271	May 5, 1908.....	November 30, 1908.....	210	April 25, 1908	

STATEMENT of the number of locks, their lift in feet, total lockage of each canal, etc., of all the canals in the State of New York.

NAME OF CANAL.	Length in miles.	Lockage in feet.
Erie canal.....	351.78	655.80
Navigable feeders of same.....	3.35	.....
Champlain canal.....	66.00	179.50
Pond above Troy dam.....	3.00	.....
Glens Falls feeder and pond.....	12.00	132.00
Black River canal.....	35.33	1,082.25
Black River feeder.....	13.47	.....
Black River improvement.....	42.50	.....
Oneida Lake canal.....	.....	62.00
Oswego canal.....	38.00	154.85
Oneida river improvement.....	20.00	7.85
Seneca river towing-path.....	5.00	.....
Baldwinsville canal.....	1.00	8.00
Cayuga and Seneca canal.....	22.77	76.61
Cayuga inlet.....	2.00	.....
Total.....	622.20	2,357.86

NAME OF CANAL.	SITE OF CANAL.				NUMBER AND SIZE OF LOCKS.			Average burden of boats.	Maximum burden of boats.
	Length in miles.	Width on surface.	Width on bottom.	Depth of water.	Number of locks.	Length between quoins.	Width in clear.		
Erie canal.....	363	40	28	4	83	90	15	70	76
Enlargement of same.....	351½	70	56	7	72	110	18	210	240
Oswego canal.....	38	40	24	4	18	90	15	70	76
Enlargement of same.....	38	70	56	7	18	110	18	210	240
Cayuga and Seneca canal.....	21	40	24	4	10	90	16	70	76
Enlargement of same.....	23	70	56	7	11	110	18	210	240
Champlain canal.....	66	50	35	5	20	110	18	85	120
Glens Falls feeder.....	12	50	35	5	12	100	18	80	85
Pond above Troy dam.....	3	.....	.....	.....	1	.....	.....	.....	.....
Black River canal and feeder.....	50	42	26	4	100	90	15	70	76
Black River improvement.....	42	.....	.....	.....	1	110	18	70	76
Oneida river improvement.....	20	80	60	4½	2	120	30	70	76
Oneida Lake canal.....	70	70	56	7	7	110	18	220	220
Baldwinsville and Seneca tow-path	5½	40	24	4	1	90	15	70	76

## ERIE CANAL.

REMARKS.	Old canal (not now in existence).	Enlargement.
Construction authorized.....	April 15, 1817.....	May 11, 1835
Construction commenced.....	July 4, 1817.....	August, 1836.
Construction completed.....	October 26, 1825.....	September, 1862.
Estimated cost at engineer's prices.....	\$4,926,738.....	\$23,402,803.
Actual cost of construction.....	\$7,143,789.....	\$44,465,414.
Total feet of lockage.....	675½.....	655 80-100 feet.
Length from Albany to Buffalo.....	363 miles.....	351½ miles.
Number locks and size of chambers.....	83 locks, 90x115.....	72 locks, 110x18.
Size of prism.....	40 and 28x4.....	70 and 56x7.
Maximum dimension of boats.....	78 62-100x14 46-100x3½, draft.....	98x17.5-12x6 feet draft.
Burden of boats.....	75 tons.....	240 tons.

Counties through which the Erie canal runs—Albany, Cayuga, Erie, Herkimer, Madison, Monroe, Montgomery, Niagara, Onondaga, Oneida, Orleans, Saratoga, Schenectady and Wayne.

## LOCKS.

No. of lock.	Double or single.	Lift.	No. of lock.	Double or single.	Lift.	No. of lock.	Double or single.	Lift.
1.....	Double...	15½	25.....	Double..	8	49.....	Double..	6
2.....	Double..	9½	26.....	Double..	8	50.....	Double..	6 11-12
3.....	Double..	11½	27.....	Double..	8	51.....	Double..	5½
4.....	Double..	11½	28.....	Double..	8	52.....	Double..	11
5.....	Double..	10	29.....	Double..	7	53.....	Double..	6
6.....	Double..	10	30.....	Double..	10½	54.....	Double..	7½
7.....	Double..	10	31.....	Double..	6	55.....	Double..	6
8.....	Double..	10	32.....	Double..	8	56.....	Double..	10
9.....	Double..	10	33.....	Double..	6	57.....	Double..	8
10.....	Double..	10	34.....	Double..	8	58.....	Double..	8
11.....	Double..	10	35.....	Double..	8	59.....	Double..	8
12.....	Double..	10	36.....	Double..	10	60.....	Double..	10
13.....	Double..	10	37.....	Double..	10	61.....	Double..	9
14.....	Double..	10	38.....	Double..	9½	62.....	Double..	9
15.....	Double..	10	39.....	Double..	10½	63.....	Double..	9
16.....	Double..	10	40.....	Double..	8	64.....	Double..	10
17.....	Double..	10	41.....	Double..	8	65.....	Double..	10
18.....	Double..	10½	42.....	Double..	8	66.....	Double..	9
19.....	Double..	8½	43.....	Double..	8	67.....		
20.....	Double..	10	44.....	Double..	10½	68.....		
21.....	Double..	11½	45.....	Double..	10½	69.....	Double..	55 10-12
22.....	Double..	11½	46.....	Double..	3	70.....		
23.....	Double..	8	47.....	Double..	10½	71.....		
24.....	Double..	8	48.....	Double..	10½	72 gd. Blk. Rk. & Buf.	Double..	2

## LOCATION OF LOCKS.

COUNTIES.	Number of locks.	COUNTIES.	Number of locks.
Albany.....	1 to 18, inclusive.....	Onondaga.....	47 to 51, inclusive.
Saratoga.....	19 and 20.....	Cayuga.....	52.
Schenectady.....	21 to 25, inclusive.....	Wayne.....	53 to 60, inclusive.
Montgomery.....	26 to 34, inclusive.....	Ontario.....	61 to 66, inclusive.
Herkimer.....	35 to 45, inclusive.....	Monroe.....	67 to 71, inclusive.
Oneida.....	46.....	Orleans.....	
Madison.....		Niagara.....	

## CHAMPLAIN CANAL AND GLENS FALLS FEEDER.

Construction authorized..... April 15, 1817.  
 Glens Falls feeder authorized..... April, 1822.  
 Estimated cost of canal at engineers' prices..... \$371,000.  
 Navigation opened from Fort Edward to Lake Champlain..... November 24, 1819.  
 Canal completed from Waterford to Lake Champlain..... 1822.  
 Canal, cost of construction up to 1827..... \$921,011.  
 Feeder, cost of construction up to 1837..... \$91,944.  
 Total cost of both included improvements, exclusive of ordinary  
 ■ repairs, June, 1868..... \$2,378,910.  
 Number of locks on canal, 20; feeder 13..... Size, 110x18 and 100x15.  
 Length of canal, 66 miles; feeder, 7 miles; pond, 5 miles..... 73 miles.  
 Size of prism, canal and feeder..... 40.26x4.  
 Size authorized, chapter 213, Laws of 1860..... 50.35x5.  
 Total cost, including improvements and enlargements, up to 1875 \$4,044,000.  
 Counties through which the Champlain canal runs—Rensselaer, Saratoga, Warren and  
 Washington.  
 The Glens Falls feeder is located in the counties of Warren and Washington.

## LOCKS.

CHAMPLAIN CANAL.						GLENS FALLS FEEDER.			
No.	Lift.	No.	Lift.	No.	Lift.	No.	Lift.	No.	Lift.
1.....	10½	8.....	8½	15.....	8	1.....	10	8.....	10
2.....	10½	9.....	10	16.....	7	2.....	10	9.....	10
3.....	8½	10.....	9½	17.....	2½	3.....	10	10.....	10
4.....	9	11.....	11½	18.....	9	4.....	10	11.....	11
5.....	9	12.....	9	19.....	9	5.....	10	12.....	12
6.....	9	13.....	10½	20.....	10	6.....	10	13.....	10
7.....	9½	14.....	8			7.....	10		



## BLACK RIVER CANAL FEEDER AND BLACK RIVER IMPROVEMENT.

Construction authorized.....	April 19, 1836.
Construction commenced.....	January, 1838.
Estimated cost at engineers' prices.....	\$1,068,437.
Estimated cost at contract prices.....	\$2,431,069.
Canal completed.....	1849.
Cost of construction.....	\$3,581,954.
Number and size of locks.....	109 locks; 90x15.
Length of canal to Lyons Falls.....	35 miles.
Length of river to Carthage, and fall.....	42 miles; 9½ feet.
Size of prism of canal and feeder.....	42 and 28x4.
Length of navigable feeder, and fall.....	10½ miles; 6 10-100 feet.
Burden of boats.....	45 to 50 tons.
Lockage of canal.....	1,082½ feet.

## LOCKS.

No.	Lift.	No.	Lift.	No.	Lift.	No.	Lift.	No.	Lift.
1.....	10	23.....	10	45.....	10	67.....	10	89.....	10
2.....	10	24.....	10	46.....	10	68.....	9	90.....	10
3.....	10	25.....	10	47.....	10	69.....	9	91.....	12
4.....	10	26.....	10	48.....	10	70.....	9	92.....	10
5.....	10	27.....	10	49.....	10	71.....	10	93.....	10
6.....	10	28.....	10	50.....	10	72.....	10	94.....	10
7.....	10	29.....	10	51.....	10	73.....	10	95.....	10
8.....	11	30.....	10	52.....	10	74.....	10	96.....	10
9.....	12	31.....	10	53.....	10	75.....	10	97.....	10
10.....	11	32.....	10	54.....	10	76.....	10	98.....	10
11.....	11	33.....	10	55.....	10	77.....	10	99.....	10
12.....	11	34.....	10	56.....	10	78.....	10	100.....	10
13.....	8	35.....	10	57.....	10	79.....	10	101.....	10½
14.....	8	36.....	10	58.....	10	80.....	9	102.....	10½
15.....	8	37.....	10	59.....	10	81.....	9	103.....	4
16.....	10	38.....	10	60.....	10	82.....	9	104.....	10
17.....	8	39.....	10	61.....	10	83.....	9	105.....	10
18.....	10	40.....	10	62.....	10	84.....	9	106.....	11
19.....	8	41.....	10	63.....	10	85.....	10	107.....	11
20.....	10	42.....	10	64.....	10	86.....	11½	108.....	12
21.....	10	43.....	10	65.....	10	87.....	10	109.....	12
22.....	10	44.....	10	66.....	10	88.....	10	.....	.....

Counties through which the Black River canal runs—Oneida and Lewis.

## ONEIDA LAKE CANAL AND ONEIDA RIVER IMPROVEMENT.

REMARKS.	Oneida Lake Canal.	Oneida river improvement.
Construction authorized.....	March 22, 1832.....	April 29, 1839.
Estimated cost at engineers' prices.....	\$40,000.....	\$100,049.
Construction completed.....	1836.....	1850.
Cost of construction.....	\$450,678.....	\$368,164.
Purchased of company by State.....	May 11, 1840.....	For \$50,000.
Enlargement of locks authorized.....	Chapter 46, Laws of 1860.	
Number and size of new locks.....	7, 110x18.....	2, 120x30½.
Size of prism.....	40x20x4.....	80x60x4½.
Length.....	7 miles.....	20 miles.
Feet of lockage.....	60½ feet.....	No. 1, 3 ft.; No. 2, 3½ ft.

## LOCKS.

PRESENT OLD LOCKS.						ENLARGED LOCKS AUTHORIZED.					
No.	Lift.	No.	Lift.	No.	Lift.	No.	Lift.	No.	Lift.	No.	Lift.
1.....	7½	4....	10	6....	7½	1.....	8½	4....	10½	6....	8
2.....	8½	5....	9½	7....	6½	2.....	8½	5....	9½	7....	7½
3.....	9	.....	.....	.....	.....	3.....	8	.....	.....	.....	.....

## OSWEGO CANAL.

[Total cost, \$4,992,926.]

REMARKS.	Oswego canal.	Enlarged Oswego canal.
Construction authorized.....	April 20, 1825.....	April 15, 1854.
Enlargement of locks.....		Chapter 282, Laws of 1847.
Estimated cost at engineers' prices.....	\$277,000.....	\$1,926,336.
Estimated cost at contract prices.....	\$437,000.....	\$2,051,190.
Construction completed.....	December 10, 1828...	September, 1862.
Cost of construction.....	\$565,473.....	\$4,427,589.
Number of locks and size.....	13, 90x15.....	17, 110x18.
Feet of lockage.....	154, 85 feet.....	154, 85 feet.
Average cost of one lock.....	\$10,000.....	\$31,000.
Size of prism of canal.....	40 and 26x4.....	70 and 56x7 feet.
Guard locks.....	Six.....	Five.
Burden of boats.....	50 to 75 tons.....	230 tons.
Length of canal.....	38 miles.....	38 miles.

## LOCKS.

No.	Lift.	No.	Lift.	No.	Lift.	No.	Lift.	No.	Lift.
1.....	11	4 }.....	9.6 }	8.....	11½	12.....	11½	16.....	8½
2.....	11	5 }.....		9.....	7½	13.....	5.65	17.....	10½
3.....	10½	6.....	7	10.....	9	14.....	9½	18.....	9½
		7.....	5.866	11.....	11½	15.....	5½		

Counties through which the Oswego canal runs—Onondaga and Oswego.

## CAYUGA AND SENECA CANAL—CAYUGA INLET.

[Total cost, \$2,232,632.]

REMARKS.	Cayuga and Seneca canal.	Cayuga inlet.
Construction authorized, enlargement of locks.....	April 20, 1825.....	May 25, 1836.
Enlargement of prism.....		April 15, 1854.
Estimated cost at engineers' prices.....	\$811,188.....	\$150,000.
Estimated cost at contract prices.....	\$795,272.....	\$160,396.
Canal completed.....	November 15, 1828..	September, 1862.
Cost of construction.....	\$2,010,320.....	\$214,000.
Number of locks and size.....	11, 110x18.....	1, 110x18.
Feet of lockage.....	83½.....	
Length and size of prism.....		24½ miles, 70 and 56x7.

## LOCKS.

No.	Lift.	No.	Lift.	No.	Lift.	No.	Lift.	No.	Lift.
1.....	7.28	4.....	9	6.....	9.60	8.....	5.70	10.....	10
2.....	7	5.....	9	7.....	6	9.....	10	11.....	3
3.....	10								

Counties through which the Cayuga and Seneca canal runs—Cayuga, Seneca and Ontario.

## ERIE CANAL.

*A List of the principal places on the canals, and their distance from each other, as adopted by the Canal Board.*

NAMES OF PLACES.	Albany.														Buffalo.													
	West Troy.	Schenectady.	Fultonville.	Little Falls.	Utica.	Rome.	Syracuse.	Jordan.	Montezuma.	Lyons.	Palmyra.	Rochester.	Brockport.	Albion.	Medina.	Lockport.	Tonawanda.	Lower Black Rock										
Adam's Basin.....	267	244	218	187	164	149	108	89	175	57	42	15	5	19	29	47	66	74	83									
Albany.....	7	30	56	87	110	125	166	105	199	217	232	259	279	293	303	321	340	348	380									
Albion.....	286	263	237	206	183	166	127	108	94	76	61	34	14	240	250	268	287	295	996									
Aurlesville.....	53	46	26	3	34	57	72	113	132	146	179	206	226	240	250	268	287	295	565									
Belle Isle.....	172	165	142	116	85	62	47	6	13	27	45	80	87	121	131	149	168	176	712									
Black Rock.....	349	342	319	282	239	224	183	164	150	132	117	90	107	56	46	28	98	1	200									
Bolivar.....	152	145	122	96	65	42	27	14	33	47	65	80	107	127	141	151	169	188	200									
Brighton.....	256	249	226	200	169	146	131	90	71	57	39	24	3	23	37	47	65	84	92									
Brockport.....	279	272	249	223	192	169	154	113	94	80	62	47	20	9	14	24	42	61	73									
Brockville.....	288	281	258	232	201	178	163	122	103	89	71	56	29	10	15	33	52	69	84									
Brockways.....	269	262	239	213	182	159	144	103	84	70	52	37	10	24	34	42	61	79	83									
Buffalo.....	352	345	322	296	265	242	227	186	167	153	135	120	93	71	55	73	92	100	104									
Bushnell's Basin.....	248	241	218	192	161	138	123	82	63	49	31	16	11	31	45	55	73	92	100									
Camillus.....	175	168	145	119	88	65	50	9	10	24	42	57	84	104	118	128	146	165	177									
Canajoharie.....	68	61	38	12	19	42	57	98	117	131	149	164	191	211	225	253	272	280	284									
Canaseraga Landing.....	145	138	120	94	63	40	25	16	35	49	67	82	109	129	143	158	176	195	207									
Canton.....	180	173	150	124	93	70	55	14	5	19	33	52	79	99	113	123	141	160	202									
Cartersville.....	250	243	220	194	163	140	125	84	65	51	33	18	9	29	43	53	71	90	172									
Centrepot.....	192	185	162	130	105	82	67	26	7	7	25	40	67	87	101	111	129	148	160									
Chittenango.....	151	144	121	95	64	41	27	15	34	48	66	81	108	128	142	152	170	189	201									
Clyde.....	210	203	180	154	123	100	85	44	25	11	206	221	248	268	282	292	310	329	341									
Cohoes.....	11	4	19	45	76	99	114	155	174	188	206	221	248	268	282	292	310	329	341									
Cold Spring.....	186	179	156	130	99	76	61	20	1	13	31	46	73	93	107	117	135	154	166									
Cooley's Basin.....	277	270	247	221	190	167	152	111	92	78	60	45	18	2	16	26	44	63	75									
Crescent.....	14	7	26	42	73	96	141	152	171	185	203	218	245	265	279	289	307	326	338									
Durhamton.....	136	129	106	80	49	26	11	36	45	59	81	96	123	143	157	167	185	204	216									
Durhamville.....	140	133	110	84	53	30	15	26	45	59	81	96	123	143	157	167	185	204	216									
East Arcadia.....	296	289	266	240	209	186	171	130	111	97	79	64	37	17	73	83	101	120	132									
East Buffalo.....	220	213	190	164	133	110	95	54	35	21	3	12	39	59	73	83	101	120	132									

## ERIE CANAL—(Concluded).

NAMES OF PLACES.	Albany.	West Troy.	Schenectady.	Fultonville.	Little Falls.	Utica.	Rome.	Syracuse.	Jordan.	Montezuma.	Lyons.	Palmyra.	Rochester.	Brockport.	Albion.	Medina.	Lockport.	Tonawanda.	Lower Black Rock.	Buffalo.
East Canada Creek.....	82	75	52	26	5	28	43	84	103	117	135	150	177	197	211	221	239	258	266	270
Fairport.....	244	237	214	188	157	134	119	78	59	45	27	12	15	35	49	59	77	96	104	180
Fort Plain.....	71	64	41	15	16	39	54	65	114	128	146	161	188	208	222	232	250	269	277	281
Frankfort.....	101	94	71	45	14	9	24	65	84	98	116	131	158	178	192	202	220	239	247	251
Fullman's Basin.....	245	238	215	189	158	135	120	79	60	46	28	13	14	34	48	58	76	95	103	170
Fultonville.....	56	49	26	31	54	54	69	110	129	143	161	176	203	223	237	247	265	284	292	296
Fergusons.....	106	99	76	50	19	4	19	60	79	93	111	126	153	173	187	197	215	234	242	246
Gain's Basin.....	295	288	265	239	208	185	170	129	110	96	78	63	36	16	2	8	26	15	53	57
Gasport.....	315	308	285	259	228	205	190	143	130	116	98	83	56	36	12	6	25	33	37	37
Geddes.....	168	161	138	112	81	58	143	2	17	31	49	64	91	111	125	135	153	172	180	184
Greece (Six-Mile Grocery)	266	259	236	210	179	158	141	160	81	67	49	34	7	13	27	37	55	74	82	86
Higginsville.....	135	128	105	79	48	25	10	31	50	64	82	97	124	144	158	168	186	205	213	217
Hindsburg.....	289	282	259	233	202	179	159	118	99	85	67	57	30	10	4	14	32	51	59	63
Hoffman's Ferry.....	40	33	10	16	47	70	85	126	145	159	177	192	219	239	253	263	281	300	308	312
Holley.....	284	277	254	228	197	174	159	121	99	85	67	55	25	8	9	16	34	53	61	65
Hulberton.....	287	280	257	231	200	177	162	121	102	88	70	52	28	8	6	19	37	56	64	68
Ilion.....	98	91	68	42	11	12	27	68	87	101	119	134	161	181	195	205	223	242	250	254
Jordan.....	185	178	155	129	98	75	60	19	178	192	210	235	252	274	286	296	314	333	341	345
Junction.....	155	148	123	99	80	103	148	159	130	100	82	67	104	124	138	148	166	185	193	197
Kirkville.....	241	234	211	185	154	131	116	75	56	42	24	9	18	38	52	62	80	99	107	111
Knappsville.....	299	292	269	243	212	189	174	133	114	100	82	67	104	124	138	148	166	185	193	197
Knowlesville.....	143	136	113	87	56	33	18	23	42	56	74	89	116	136	150	160	178	197	205	209
Lenox.....	159	152	129	103	72	50	34	79	36	40	58	74	100	120	134	144	162	181	189	193
Limestone Feeder.....	87	80	57	31	10	23	38	79	28	112	130	145	172	192	206	216	234	253	261	265
Little Falls.....	214	207	184	158	127	104	89	48	98	115	134	153	184	204	218	228	246	266	284	292
Lock Berlin.....	321	314	291	265	234	211	196	155	136	122	104	89	62	42	28	18	19	19	27	31
Lockport.....	323	316	293	267	236	213	198	157	138	124	104	89	62	42	28	18	19	19	27	31
Lockville.....	253	246	223	197	166	143	128	87	68	54	36	21	6	26	40	50	68	87	95	99
Lock No. 65.....	165	158	135	109	78	55	40	21	20	34	52	67	94	114	128	138	156	175	183	187
Lodi.....	127	130	107	81	50	27	12	29	48	62	81	95	122	142	156	166	184	203	211	215
Loomis.....	348	341	318	292	261	238	223	182	163	149	131	116	89	69	55	45	27	8	184	214
Lower Black Rock.....	348	341	318	292	261	238	223	182	163	149	131	116	89	69	55	45	27	8	184	214

Lyons.....	217	210	187	161	130	107	92	51	32	18	...	15	42	62	76	86	104	123	131	135
Maybees.....	316	307	284	258	227	204	189	148	129	115	97	82	55	35	21	11	85	104	112	116
Macedon.....	234	229	206	180	149	126	111	70	51	37	19	4	23	43	135	145	163	182	190	194
Manlius.....	158	151	128	102	71	48	33	8	27	41	59	74	101	121	135	145	163	182	190	194
Martinsville.....	336	329	306	280	249	226	211	170	151	137	119	74	101	121	135	145	163	182	190	194
Medina.....	303	296	273	247	216	193	178	137	118	104	86	71	44	33	15	10	18	37	45	49
Middleport.....	309	302	279	253	222	199	184	143	124	110	92	77	50	24	10	6	12	31	39	43
Mills.....	318	311	288	262	231	208	193	152	133	119	101	86	59	39	25	15	243	362	370	374
Millardville.....	78	71	48	22	9	32	47	107	121	139	154	181	201	225	243	262	270	280	287	294
Minnow.....	95	88	65	39	8	15	30	71	104	104	18	33	60	80	98	104	108	122	141	149
Montezuma.....	199	192	169	143	112	89	74	33	14	25	7	8	35	55	69	79	97	116	124	128
Newark.....	224	217	194	168	137	114	99	58	39	25	68	83	110	130	144	154	172	191	199	203
New Boston Landing.....	149	142	119	93	62	39	24	17	26	50	68	83	110	130	144	154	172	191	199	203
New London.....	131	134	101	75	44	21	6	35	54	68	86	101	128	148	162	172	190	209	217	201
Nine-Mile Creek.....	174	157	144	118	87	64	49	8	11	25	43	58	85	105	119	129	147	166	174	178
Orangeport.....	316	309	286	260	229	206	191	150	131	117	99	84	57	37	23	13	5	24	32	36
Oriskany.....	117	110	87	61	30	7	8	49	68	82	100	115	142	162	176	186	204	203	231	235
Orville Feeder.....	161	154	131	105	74	51	36	5	24	38	56	71	98	118	132	142	160	179	187	191
Palmyra.....	328	321	298	272	241	218	203	162	143	129	111	96	69	49	35	25	7	12	20	24
Peru.....	182	175	152	126	95	72	57	16	3	17	35	50	77	97	111	121	139	158	166	170
Pendleton.....	333	326	303	277	246	223	208	167	148	134	116	101	74	54	40	30	12	7	15	19
Picardville.....	251	244	221	195	164	141	126	85	66	52	34	19	8	28	42	52	70	89	97	101
Pitt Lock.....	154	147	124	98	67	44	29	12	31	45	63	78	105	125	139	149	167	186	194	198
Pittsford.....	194	187	164	138	107	84	69	28	9	28	10	5	32	52	66	76	94	113	121	125
Pool's Brook.....	227	220	197	171	140	117	102	61	42	28	10	5	32	52	66	76	94	113	121	125
Port Byron.....	313	306	283	257	226	203	188	147	128	114	96	81	54	34	20	10	8	27	35	39
Port Gibson.....	125	118	95	69	38	15	...	93	74	60	42	27	...	20	34	44	62	81	81	93
Port Jackson.....	257	252	229	203	172	149	134	93	74	60	42	27	...	20	34	44	62	81	81	93
Reynolds's Basin.....	306	299	276	250	219	196	181	140	121	107	89	74	47	27	13	3	15	34	42	46
Rochester.....	125	118	95	69	38	15	...	93	74	60	42	27	...	20	34	44	62	81	81	93
Rome.....	21	24	21	26	5	36	59	74	115	135	154	168	178	196	215	223	243	263	283	297
Schenectady.....	306	299	276	250	219	196	181	140	121	107	89	74	47	27	13	3	15	34	42	46
Schoharie Creek.....	271	264	241	215	184	161	146	105	86	72	54	39	12	8	22	32	50	69	77	81
Shelly Basin.....	65	58	35	9	22	45	60	101	129	134	152	167	183	203	218	228	245	264	283	297
Spencerport.....	76	69	46	20	11	34	49	90	109	123	141	156	174	194	213	228	245	264	283	297
Sprakers.....	326	319	296	270	239	216	201	160	141	127	109	94	67	47	33	23	5	14	22	26
St. Johnsville.....	166	159	135	110	79	56	41	172	155	141	123	108	81	61	47	37	195	215	230	242
Sulphur Spring G Lock.....	140	133	110	80	54	30	61	145	159	173	191	208	233	253	267	277	295	314	322	326
Syracuse.....	259	252	229	203	172	149	134	93	74	60	42	27	...	20	34	44	62	81	81	93
Tonawanda.....	190	183	160	134	103	80	65	24	5	9	27	42	69	89	103	113	131	150	158	162
Upper Aqueduct.....	110	103	80	54	30	61	145	159	173	191	208	233	253	267	277	295	314	322	326	326
Utica.....	259	252	229	203	172	149	134	93	74	60	42	27	...	20	34	44	62	81	81	93
Weedsport.....	190	183	160	134	103	80	65	24	5	9	27	42	69	89	103	113	131	150	158	162
West Troy.....	114	107	84	58	27	4	11	52	71	85	103	118	145	165	179	189	207	226	234	239
Whitesboro.....	62	55	32	6	25	27	48	63	104	123	137	155	170	191	217	231	241	259	278	286
Yatesville.....	113	106	83	57	26	3	12	53	72	86	104	119	146	166	180	190	208	227	235	239
York Mills.....																				

## CHAMPLAIN CANAL.

NAMES OF PLACES.	DISTANCE FROM—		
	Place to place.	Albany.	Whitehall.
Albany.....	.....	.....	73
West Troy.....	7	7	66
Junction.....	.....	7	66
Waterford.....	3	12	61
Mechanicville.....	8	20	53
Stillwater Village.....	4	24	49
Bleecker's Basin.....	2	26	47
Wilbur's Basin.....	2	28	45
Van Dusen's Landing.....	5	33	40
Schuylerville.....	3	36	37
Saratoga bridge.....	2	38	35
Fort Miller.....	3	41	32
Moses Kill.....	3	44	29
Fort Edward.....	5	49	24
Glens Falls feeder.....	2	51	22
Baker's Basin.....	1	52	21
Smith's Basin.....	5	57	16
Fort Ann.....	4	61	12
Comstock's Landing.....	4	65	8
Whitehall.....	8	73	.....

## GLENS FALLS FEEDER — CHAMPLAIN CANAL.

NAMES OF PLACES.	Distance from place to place.
Champlain canal.....	.....
Sandy Hill.....	2
Glens Falls.....	3
Head of the feeder.....	2
Head of the pond.....	5
From Junction to Whitehall.....	66
Length of Glens Falls feeder.....	12
Length of pond above Troy dam.....	3
Total.....	81

## OSWEGO CANAL.

NAMES OF PLACES.	DISTANCE FROM—		
	Place to place.	Syracuse	Oswego.
Syracuse.....	.....	.....	38
Salina.....	2	2	36
Liverpool.....	3	5	33
Mud Lock.....	2	7	31
Cold Spring.....	1	8	30
New Bridge.....	5	13	25
Three River Point.....	2	15	23
Phoenix.....	2	17	21
Sweet's Lock.....	3	20	18
Ox Creek.....	2	23	15
Fulton.....	4	27	11
Braddock's Rapid.....	4	31	7
Tiffany's Landing.....	4	35	8
High Dam.....	1	36	2
Oswego.....	2	38	.....

## CAYUGA AND SENECA CANAL.

NAMES OF PLACES.	DISTANCE FROM—		
	Place to place.	Montezuma.	Geneva.
Montezuma.....	.....	.....	21
Seneca river.....	5	5	16
South Dermont.....	2	7	14
Seneca Falls.....	3	10	11
Chamberlain's Mills.....	2	12	9
Waterloo.....	2	14	7
Teal's.....	5	19	2
Geneva.....	2	21	0
Lateral canal to East Cayuga village, two miles.....	2	.....	.....

## ONEIDA LAKE CANAL AND FEEDER.

Extends from Erie canal at Higgins, four miles west of New London, to the Oneida lake, as follows:

Canal proper, from Higgins to Wood creek.....	3¾
Wood creek, with a towing path to the Oneida creek.....	2¼



## BLACK RIVER CANAL.

NAMES OF PLACES.	DISTANCE FROM—		
	Place to place.	Rome.	Boonville.
Rome .....			25
Ridge Mills .....	2	2	23
Lock No. 7 .....	3	5	20
Walworth's Storehouse .....	1	6	19
Westernville .....	3	9	16
Wells Brook Aqueduct .....	2	11	14
Stringers' Creek .....	2	13	12
Lansing Hill .....	1	14	11
Lock No. 31 .....	2	16	9
Lansing Kill dam or feeder .....	1	17	8
Lower Falls, Lansing Kill .....	2	19	6
Upper Falls, Lansing Kill .....	2	21	4
Lock No. 70 .....	2	23	2
Boonville .....	2	25	
Sugar river .....	3	28	3
Little Falls, Black river .....	1	29	4
Port Leyden .....	3	32	7
Lock No. 91 .....	1	33	8
Lyons Falls .....	2	35	10
Hawkinsville, on feeder (three miles from Boonville) ..		28	3
A. Lee's on feeder .....	2	30	5
R. B. Miller's on feeder .....	1	31	6
State dam on feeder .....	4	35	10
Head of reservoir .....	2	37	12

## ONEIDA RIVER IMPROVEMENT.

Names of places.	Distance from place to place
Three River Point .....	...
Peter Scott creek .....	4
Oak Orchard .....	4
Caughdenoy .....	7
Brewerton .....	5

## GENERAL SUMMARY.

	Miles
Erie canal .....	352
Albany basin .....	1
Feeders .....	8
	361

	Miles
Champlain canal .....	66
Glens Falls feeder.....	12
Pond above Troy dam.....	3
	<hr/>
	81
	<hr/>
Black River canal.....	35
Black River feeder and reservoir.....	12
Black River improvement.....	42
	<hr/>
	89
	<hr/>
Oneida Lake canal feeder.....	7
	<hr/>
Oswego canal .....	38
Baldwinsville side cut.....	1
Oneida river improvement.....	20
Seneca river towing path.....	5¾
Seneca river improvement.....	12¼
	<hr/>

Report made to the Superintendent of Public Works  
by the Inspectors appointed under the  
Steam Navigation Law.

DEPARTMENT OF PUBLIC WORKS,  
BUREAU OF NAVIGATION.

ALBANY, *December 31, 1908.*

HON. F. C. STEVENS, *Superintendent of Public Works, Albany,  
N. Y.:*

DEAR SIR.—Pursuant to the provisions of section 27, chapter 30 of the General Laws, we hereby report the operation of the Bureau of Navigation for the year ended December 31, 1908.

Whole number of vessels inspected.....	266
Withdrawn and under repairs.....	34
Whole number of officers licensed.....	447

Out of the whole number inspected it was found necessary to order repairs and equipments on 126, whose certificates were temporarily withdrawn until their affidavits were forwarded to the inspectors to the effect that their orders had been obeyed.

There has been no loss of life nor property during the year and we beg to report the condition of the Bureau as satisfactory. We think that there should be some way by which a few of the violators of the law can be arrested, which will, without doubt, give better satisfaction to those who obey the law in full. We called your attention in last year's report to the almost absolute impossibility of our performing said duty, for the reason that our presence is always known, as we have to notify the boat owners in advance of our coming.

We would like to have an interview with you when convenient as to the propriety of such action and how we think it should be done.

Fees collected and paid to the Department amount to \$3,830, which is \$536 more than any previous year.

Respectfully yours,

W. S. VAN KEUREN,  
G. C. WEHLING,

*Inspectors.*

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**REPORT**  
**OF THE**  
**SUPERINTENDENT OF PUBLIC WORKS**  
**UPON THE**  
**TRADE AND TONNAGE OF THE CANALS**  
**FOR THE YEAR 1908.**

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ANNUAL ACCOUNT of property (in tons of 2,000 lbs.) shipped on the canals each week during the season of 1908.

DAYS.	THE FOREST—PRODUCT OF WOOD.							
	Boards and scantling.	Shingles.	Timber.	Staves.	Wood.	Pulp wood.	Wood pulp.	Ashes, pot and pearl.
Fifth to fourteenth .....	4,833	.....	140	.....	.....	.....	.....	601
Fifteenth to twenty-second .....	5,878	.....	200	.....	.....	.....	.....	482
Twenty-third to close .....	10,480	.....	.....	.....	868	2,904	168	227
Total May .....	21,191	.....	340	.....	868	2,904	168	1,310
First to seventh .....	9,242	.....	1,547	.....	448	2,957	.....	.....
Eighth to fourteenth .....	9,917	.....	2,007	.....	938	1,518	.....	18
Fifteenth to twenty-second .....	10,480	.....	.....	.....	560	1,473	.....	490
Twenty-third to close .....	18,002	.....	2,453	.....	370	11,014	209	.....
Total June .....	47,641	.....	6,007	.....	2,316	16,962	209	508
First to seventh .....	7,768	.....	100	.....	280	5,340	13	116
Eighth to fourteenth .....	12,059	.....	.....	.....	1,047	7,059	55	.....
Fifteenth to twenty-second .....	10,005	.....	.....	.....	.....	7,437	114	.....
Twenty-third to close .....	18,707	.....	326	.....	162	14,038	211	496
Total July .....	48,539	.....	426	.....	1,489	33,874	393	614

First to seventh.....	11,444	.....	.....	.....	157	13,426	214	.....
Eighth to fourteenth.....	10,583	.....	.....	72	.....	8,828	69	.....
Fifteenth to twenty-second.....	15,691	.....	.....	.....	.....	14,126	25	.....
Twenty-third to close.....	23,615	.....	.....	.....	882	16,567	336	232
Total August.....	61,333	.....	.....	72	1,039	52,947	644	232
First to seventh.....	11,411	.....	.....	.....	333	7,106	133	.....
Eighth to fourteenth.....	11,415	.....	.....	112	448	4,180	414	495
Fifteenth to twenty-second.....	11,311	.....	.....	.....	140	5,063	26	.....
Twenty-third to close.....	19,472	.....	.....	.....	3,150	11,628	61	491
Total September.....	53,609	.....	.....	112	4,071	27,977	634	986
First to seventh.....	14,112	.....	.....	.....	871	.....	208	.....
Eighth to fourteenth.....	13,250	.....	.....	.....	1,669	6,705	.....	224
Fifteenth to twenty-second.....	16,036	.....	.....	112	538	5,135	169	503
Twenty-third to close.....	17,969	.....	.....	.....	1,072	10,645	2,071	.....
Total October.....	61,367	.....	.....	112	4,150	22,485	2,448	727

*Annual account of property (in tons) shipped, etc.—(Continued).*

DAYS.	THE FOREST—PRODUCT OF WOOD.							
	Boards and scantling.	Shingles.	Timber.	Staves.	Wood.	Pulp wood.	Wood pulp.	Ashes, pot and pearl.
First to seventh.....	13,654	.....	.....	.....	434	1,081	3,007	.....
Eighth to fourteenth.....	31,127	6	.....	.....	476	10,948	113	448
Fifteenth to twenty-second.....	12,539	6	120	.....	840	.....	.....	1,143
Twenty-third to close.....	7,959	.....	.....	.....	224	.....	269	429
Total November.....	65,279	12	120	.....	1,974	12,029	3,389	2,020
Total for the year.....	358,959	12	7,189	.....	15,907	169,178	7,885	6,397

*Annual account of property (in tons) shipped, etc.—(Continued).*

DAYS.	Product of animals— Lard, tallow and lard oil.	AGRICULTURE—VEGETABLE FOOD.				
		Flour.	Wheat.	Rye.	Corn.	Barley.
Fifth to fourteenth .....	.....	.....	19,314	.....	1,736	.....
Fifteenth to twenty-second .....	71	.....	7,239	.....	1,456	.....
Twenty-third to close .....	1	.....	4,194	.....	1,820	.....
Total May .....	72	.....	30,747	.....	5,012	.....
First to seventh .....	19	.....	3,336	.....	1,907	.....
Eighth to fourteenth .....	142	.....	960	.....	2,044	.....
Fifteenth to twenty-second .....	.....	.....	2,640	228	1,596	.....
Twenty-third to close .....	.....	3	1,680	.....	1,176	.....
Total June .....	161	3	8,616	228	6,723	.....
First to seventh .....	202	.....	3,004	.....	1,864	.....
Eighth to fourteenth .....	66	.....	5,922	.....	1,856	461
Fifteenth to twenty-second .....	.....	.....	4,770	.....	1,624	.....
Twenty-third to close .....	87	5	7,996	.....	3,518	.....
Total July .....	355	5	21,692	.....	8,862	461



*Annual account of property (in tons) shipped, etc.—(Continued).*

DAYS.	Product of animals— Lard, tallow and lard oil.	AGRICULTURE—VEGETABLE FOOD.				
		Flour.	Wheat.	Rye.	Corn.	Barley.
First to seventh.....	.....	.....	2,580	.....	4,465	.....
Eight to fourteenth.....	.....	.....	6,933	.....	2,292	.....
Fifteenth to twenty-second.....	25	.....	7,611	.....	4,751	912
Twenty-third to close.....	.....	.....	4,707	.....	3,490	687
Total August.....	25	.....	21,831	.....	14,998	1,599
First to seventh.....	.....	.....	4,293	.....	1,652	687
Eight to fourteenth.....	135	.....	3,434	.....	2,184	482
Fifteenth to twenty-second.....	21	5	5,355	.....	4,312	6,009
Twenty-third to close.....	88	.....	10,828	700	5,109	4,519
Total September.....	244	5	23,910	700	13,257	11,697

First to seventh.....	17	.....	9,579	1,184	2,640	8,620
Eighth to fourteenth.....	190	.....	4,071	.....	4,368	5,247
Fifteenth to twenty-second.....	43	.....	10,241	.....	2,464	3,749
Twenty-third to close.....	47	.....	10,242	.....	2,296	2,040
Total October.....	297	.....	34,133	1,184	11,768	19,656
First to seventh.....	140	.....	8,278	.....	3,024	5,757
Eighth to fourteenth.....	123	5	13,242	.....	2,464	4,533
Fifteenth to twenty-second.....	.....	.....	15,966	.....	2,688	3,826
Twenty-third to close.....	.....	.....	5,252	.....	1,904	480
Total November.....	263	5	42,738	.....	10,080	14,596
Total for the year.....	1,417	18	183,667	2,112	70,700	48,009

*Annual account of property (in tons) shipped, etc.—(Continued).*

DAYS.	AGRICULTURE—VEGETABLE FOOD.						
	Barley malt.	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.	Dried fruit.
Fifth to fourteenth .....	.....	2,234	.....	99	.....	.....	15
Fifteenth to twenty-second .....	.....	2,407	.....	.....	.....	.....	.....
Twenty-third to close .....	651	3,359	.....	22	.....	.....	.....
Total May .....	651	8,000	.....	121	.....	.....	15
First to seventh .....	.....	3,158	.....	25	.....	.....	1
Eighth to fourteenth .....	.....	1,635	.....	20	.....	.....	.....
Fifteenth to twenty-second .....	442	7,556	.....	.....	.....	.....	.....
Twenty-third to close .....	657	3,900	.....	.....	.....	.....	.....
Total June .....	1,099	16,249	.....	45	.....	.....	1
First to seventh .....	.....	1,344	.....	26	.....	.....	1
Eighth to fourteenth .....	238	2,019	.....	111	.....	.....	.....
Fifteenth to twenty-second .....	605	1,376	.....	299	.....	.....	.....
Twenty-third to close .....	.....	1,574	.....	.....	.....	.....	.....
Total July .....	843	6,313	.....	436	.....	.....	1

First to seventh.....	422	1,376	.....	110	.....	.....	.....	21
Eighth to fourteenth.....	422	1,328	.....	.....	.....	.....	.....	.....
Fifteenth to twenty-second.....	1,380	1,408	.....	30	.....	.....	.....	.....
Twenty-third to close.....	.....	1,424	.....	22	.....	.....	.....	.....
Total August.....	2,224	5,536	.....	162	.....	.....	.....	21
First to seventh.....	868	1,264	.....	.....	.....	.....	.....	1
Eighth to fourteenth.....	.....	1,408	.....	.....	.....	.....	.....	.....
Fifteenth to twenty-second.....	627	1,456	.....	.....	.....	.....	.....	.....
Twenty-third to close.....	.....	1,945	.....	.....	.....	.....	.....	.....
Total September.....	1,495	6,073	.....	.....	.....	.....	.....	1
First to seventh.....	.....	2,979	.....	.....	.....	.....	.....	.....
Eighth to fourteenth.....	1,399	3,106	.....	.....	.....	.....	.....	18
Fifteenth to twenty-second.....	1,323	3,444	.....	.....	135	.....	192	.....
Twenty-third to close.....	627	1,736	.....	.....	219	.....	960	.....
Total October.....	3,349	11,265	.....	.....	354	.....	1,152	18

*Annual account of property (in tons) shipped, etc.—(Continued).*

DAYS.	AGRICULTURE—VEGETABLE FOOD.					
	Barley malt.	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.
First to seventh.....	.....	1,472	.....	.....	107	810
Eighth to fourteenth.....	.....	1,584	.....	.....	398	1,776
Fifteenth to twenty-second.....	.....	3,143	21	.....	1,548	303
Twenty-third to close.....	2,380	1,376	.....	.....	.....	.....
Total November.....	2,380	7,575	21	.....	2,053	2,889
Total for the year.....	12,041	61,011	21	764	2,407	4,041
						59

*Annual account of property (in tons) shipped, etc.—(Continued).*

DAYS.	ALL OTHER AGRICULTURAL PRODUCTS.			
	Hemp.	Clover and grass seed.	Flax seed.	Hay.
Fifth to fourteenth.....	18	30	.....	.....
Fifteenth to twenty-second.....	.....	.....	1,408	193
Twenty-third to close.....	.....	.....	2,626	280
Total May.....	18	30	4,034	473
First to seventh.....	14	.....	1,543	100
Eighth to fourteenth.....	.....	.....	1,794	463
Fifteenth to twenty-second.....	40	.....	.....	279
Twenty-third to close.....	.....	17	1,170	263
Total June.....	54	17	4,507	1,105
First to seventh.....	35	1	1,177	263
Eighth to fourteenth.....	.....	2	725	.....
Fifteenth to twenty-second.....	.....	.....	.....	87
Twenty-third to close.....	.....	.....	1,580	221
Total July.....	35	3	3,482	571

*Annual account of property (in tons) shipped, etc.—(Continued).*

DAYS.	ALL OTHER AGRICULTURAL PRODUCTS.			
	Hemp.	Clover and grass seed.	Flax seed.	Hay.
First to seventh.....	96	.....	.....	85
Eighth to fourteenth.....	96	44	1,108	93
Fifteenth to twenty-second.....	83	59	148	176
Twenty-third to close.....	34	.....	.....	87
Total August.....	309	103	1,256	441
First to seventh.....	72	.....	.....	.....
Eighth to fourteenth.....	203	.....	.....	92
Fifteenth to twenty-second.....	197	.....	3,858	64
Twenty-third to close.....	36	.....	476	138
Total September.....	508	.....	4,334	294

First to seventh.....	72	.....	697	546
Eighth to fourteenth.....	546	.....	5,962	98
Fifteenth to twenty-second.....	515	31	4,883	280
Twenty-third to close.....	.....	4	4,885	279
Total October.....	1,133	35	16,427	1,203
First to seventh.....	.....	.....	5,158	355
Eighth to fourteenth.....	228	.....	5,006	833
Fifteenth to twenty-second.....	.....	.....	10,937	299
Twenty-third to close.....	.....	.....	.....	392
Total November.....	228	.....	21,101	1,879
Total for the year.....	2,285	188	55,141	5,966



*Annual account of property (in tons) shipped, etc.—(Continued).*

DAYS	MANUFACTURES.							
	Domestic spirits.	Furniture.	Pig iron.	Bloom and bar iron.	Castings - and iron ware.	Domestic woolens.	Domestic salt.	Foreign salt.
Fifth to fourteenth.....	1	.....	.....	21	.....	.....	1,641	.....
Fifteenth to twenty-second.....	.....	.....	262	.....	.....	.....	3,558	.....
Twenty-third to close.....	.....	.....	.....	.....	.....	51	6,458	180
Total May.....	1	.....	262	21	.....	51	11,657	180
First to seventh.....	.....	.....	224	.....	.....	.....	1,463	.....
Eighth to fourteenth.....	.....	.....	503	.....	.....	.....	2,952	.....
Fifteenth to twenty-second.....	.....	.....	.....	.....	.....	.....	3,800	.....
Twenty-third to close.....	.....	50	.....	75	.....	.....	934	.....
Total June.....	.....	50	727	75	.....	.....	9,149	.....
First to seventh.....	.....	.....	.....	340	.....	.....	3,517	.....
Eighth to fourteenth.....	.....	.....	.....	.....	.....	.....	2,741	.....
Fifteenth to twenty-second.....	.....	.....	.....	.....	.....	.....	3,236	.....
Twenty-third to close.....	.....	.....	863	.....	.....	.....	3,989	.....
Total July.....	.....	.....	863	340	.....	.....	13,483	.....

First to seventh.....	.....	.....	1,327	.....	230	.....	4,543	.....
Eighth to fourteenth.....	.....	.....	2,520	.....	.....	.....	4,285	.....
Fifteenth to twenty-second.....	.....	.....	1,621	.....	.....	.....	4,556	.....
Twenty-third to close.....	.....	.....	2,974	.....	.....	.....	5,876	.....
∞ Total August.....	.....	.....	8,442	.....	230	.....	19,260	.....
First to seventh.....	.....	.....	1,277	.....	.....	.....	1,692	.....
Eighth to fourteenth.....	15	.....	2,091	.....	.....	.....	2,688	.....
Fifteenth to twenty-second.....	.....	.....	940	.....	.....	.....	3,527	.....
Twenty-third to close.....	.....	.....	1,180	.....	.....	.....	6,387	.....
Total September.....	15	.....	5,488	.....	.....	.....	14,294	.....
First to seventh.....	.....	.....	.....	508	.....	.....	4,942	.....
Eighth to fourteenth.....	.....	.....	.....	.....	.....	.....	3,041	.....
Fifteenth to twenty-second.....	17	.....	616	.....	.....	.....	2,141	.....
Twenty-third to close.....	58	.....	.....	.....	.....	17	1,383	.....
Total October.....	75	.....	616	508	.....	17	11,507	.....

*Annual account of property (in tons) shipped, etc.—(Continued).*

DAYS.	MANUFACTURES.							
	Domestic spirits.	Furniture.	Pig iron.	Bloom and bar iron.	Castings and iron ware.	Domestic woolens.	Domestic salt.	Foreign salt.
First to seventh.....	2	.....	242	.....	.....	.....	945	.....
Eighth to fourteenth.....	.....	.....	467	.....	.....	.....	2,602	.....
Fifteenth to twenty-second.....	.....	.....	2,064	.....	.....	.....	2,705	.....
Twenty-third to close.....	.....	.....	.....	.....	.....	.....	30	.....
Total November.....	2	.....	2,773	.....	.....	.....	6,282	.....
Total for the year.	93	50	19,171	944	230	68	85,632	180

*Annual account of property (in tons) shipped, etc.—(Continued).*

DAYS.	MERCHANDISE.					
	Sugar.	Molasses.	Coffee.	Iron and steel.	Flint, enamel crockery and glassware.	All other merchandise.
						Ice.
Fifth to fourteenth .....	3,141	279	36	.....	3	4,746
Fifteenth to twenty-second .....	1,446	3	102	.....	.....	4,196
Twenty-third to close .....	1,250	7	59	.....	.....	5,755
Total May .....	5,837	289	197	.....	3	13,354
First to seventh .....	1,307	111	35	70	50	3,729
Eighth to fourteenth .....	821	65	47	.....	.....	3,007
Fifteenth to twenty-second .....	726	.....	50	.....	.....	3,841
Twenty-third to close .....	1,497	.....	39	.....	.....	5,212
Total June .....	4,351	176	171	70	50	15,789
First to seventh .....	1,245	.....	444	.....	.....	4,257
Eighth to fourteenth .....	1,413	84	127	.....	.....	4,864
Fifteenth to twenty-second .....	549	.....	160	.....	.....	3,855
Twenty-third to close .....	1,145	.....	94	.....	.....	4,970
Total July .....	4,352	84	825	.....	.....	17,946
						42,785

*Annual account of property (in tons) shipped, etc.—(Continued).*

DAYS.	MERCHANDISE.					
	Sugar.	Molasses.	Coffee.	Iron and steel.	Flint, enamel crockery and glassware.	All other merchandise.
First to seventh.....	858	117	26	.....	.....	3,179
Eighth to fourteenth.....	1,433	82	217	.....	.....	4,016
Fifteenth to twenty-second.....	1,415	.....	38	.....	.....	4,493
Twenty-third to close.....	716	21	39	459	2	6,535
Total August.....	4,422	220	320	459	2	18,223
First to seventh.....	2,657	.....	1	80	.....	3,553
Eighth to fourteenth.....	1,668	19	68	184	.....	5,204
Fifteenth to twenty-second.....	1,469	.....	267	.....	.....	3,745
Twenty-third to close.....	1,048	.....	19	.....	.....	7,096
Total September.....	6,842	19	355	264	.....	19,598
						10,138

First to seventh.....	401	23	.....	.....	.....	5,375	.....
Eighth to fourteenth.....	1,273	.....	.....	.....	.....	3,607	250
Fifteenth to twenty-second.....	1,175	161	124	6	.....	4,119	389
Twenty-third to close.....	2,289	.....	69	30	.....	6,876	.....
Total October.....	5,138	184	193	36	.....	19,977	639
First to seventh.....	3,290	142	53	.....	3	5,847	190
Eighth to fourteenth.....	4,786	2	.....	.....	.....	3,767	.....
Fifteenth to twenty-second.....	1,000	.....	.....	.....	.....	2,576	.....
Twenty-third to close.....	38	.....	.....	.....	.....	4,756	.....
Total November.....	9,114	144	53	.....	3	16,946	190
Total for the year.....	40,056	1,116	2,114	829	58	121,833	122,675

*Annual account of property (in tons) shipped, etc.—(Continued).*

DAYS	OTHER ARTICLES.				
	Stone, lime and clay.	Phosphate.	MINERAL COAL.		Iron ore.
			Anthracite coal.	Bituminous coal.	
Fifth to fourteenth .....	23,775	1,045	8,597	3,063	.....
Fifteenth to twenty-second .....	20,227	831	44,480	2,178	.....
Twenty-third to close .....	25,070	754	30,690	3,814	.....
Total May .....	69,072	2,630	83,767	9,055	.....
First to seventh .....	25,969	490	29,202	4,344	.....
Eighth to fourteenth .....	28,526	281	7,951	3,272	168
Fifteenth to twenty-second .....	24,251	962	11,605	2,990	.....
Twenty-third to close .....	41,059	337	23,414	6,513	.....
Total June .....	119,805	2,070	72,172	17,119	168
First to seventh .....	35,604	336	16,591	8,440	157
Eighth to fourteenth .....	25,729	337	6,899	5,494	644
Fifteenth to twenty-second .....	34,246	511	6,233	3,069	174
Twenty-third to close .....	57,631	1,019	7,624	3,883	168
Total July .....	153,210	2,203	37,347	20,886	1,143

First to seventh.....	46,309	168	17,163	10,959	957
Eighth to fourteenth.....	28,801	.....	4,285	4,327	418
Fifteenth to twenty-second.....	30,670	606	6,018	5,183	370
Twenty-third to close.....	40,427	.....	9,105	5,668	624
Total August.....	146,207	774	36,571	26,137	2,369
First to seventh.....	61,872	393	12,252	7,042	1,038
Eighth to fourteenth.....	34,781	888	8,384	4,722	1,150
Fifteenth to twenty-second.....	32,684	782	1,684	4,735	2,850
Twenty-third to close.....	44,566	421	7,110	3,783	4,256
Total September.....	173,903	2,484	29,430	20,282	9,294
First to seventh.....	35,387	1,021	12,718	6,311	3,181
Eighth to fourteenth.....	82,119	1,002	4,766	2,389	1,686
Fifteenth to twenty-second.....	43,148	2,575	9,397	6,670	1,198
Twenty-third to close.....	39,962	3,632	12,791	5,003	1,221
Total October.....	200,616	8,230	39,672	20,373	7,286



*Annual account of property (in tons) shipped, etc.—(Continued).*

DAYS.	OTHER ARTICLES.				
	Stone, lime and clay.	Phosphate.	MINERAL COAL.		Iron ore.
			Anthracite coal.	Bituminous coal.	
First to seventh.....	42,795	1,248	15,578	11,654	1,383
Eighth to fourteenth.....	90,723	476	6,625	3,905	6,997
Fifteenth to twenty-second.....	28,613	299	7,797	4,180	504
Twenty-third to close.....	28,815	.....	29,613	6,618	.....
Total November.....	190,946	2,023	59,613	26,357	8,884
Total for the year.....	1,053,759	20,414	358,572	140,209	29,144

*Annual account of property (in tons) shipped, etc.—(Continued).*

DAYS.	OTHER ARTICLES.			
	Petroleum.	Sundries.	Total tons.	Total miles boats cleared.
Fifth to fourteenth .....	.....	2,446	77,799	74,003
Fifteenth to twenty-second .....	.....	1,016	97,648	52,678
Twenty-third to close .....	12	1,683	107,795	56,656
Total May .....	12	5,145	283,242	183,337
First to seventh .....	.....	1,770	96,721	47,440
Eighth to fourteenth .....	.....	1,199	73,765	42,231
Fifteenth to twenty-second .....	.....	193	80,319	50,260
Twenty-third to close .....	15	1,638	149,427	61,721
Total June .....	15	4,800	400,232	201,652
First to seventh .....	.....	1,192	97,735	48,685
Eighth to fourteenth .....	.....	1,649	89,156	51,461
Fifteenth to twenty-second .....	.....	987	85,286	45,486
Twenty-third to close .....	21	1,845	157,378	70,402
Total July .....	21	5,673	429,555	216,034

*Annual account of property (in tons) shipped, etc.—(Concluded).*

DAYS.	OTHER ARTICLES.			
	Petroleum.	Sundries.	Total tons.	Total miles boats cleared.
First to seventh.....	.....	2,233	128,795	85,092
Eighth to fourteenth.....	.....	1,541	89,195	56,882
Fifteenth to twenty-second.....	.....	1,661	105,091	63,206
Twenty-third to close.....	18	941	133,845	59,190
Total August.....	18	6,356	456,926	237,370
First to seventh.....	.....	225	123,124	51,362
Eighth to fourteenth.....	.....	1,715	94,375	51,006
Fifteenth to twenty-second.....	.....	630	92,317	59,225
Twenty-third to close.....	.....	1,187	136,254	75,063
Total September.....	.....	3,757	446,070	236,656

First to seventh.....	19	1,398	112,809	67,812
Eighth to fourteenth.....	.....	1,915	148,901	82,813
Fifteenth to twenty-second.....	.....	2,292	123,821	82,644
Twenty-third to close.....	21	1,728	130,172	80,527
Total October.....	40	7,333	515,703	313,796
First to seventh.....	.....	2,497	129,148	77,141
Eighth to fourteenth.....	.....	1,962	195,622	86,731
Fifteenth to twenty-second.....	.....	1,122	104,239	70,219
Twenty-third to close.....	17	588	91,140	21,220
Total November.....	17	6,169	520,149	255,311
Total for the year.....	123	39,223	3,051,877	1,644,156

ANNUAL STATEMENT showing the total quantity (in tons of 2,000 lbs.) of way freight going east during the season of 1908.

OFFICES.	THE FOREST—PRODUCT OF WOOD.						
	Boards and scantling.	Shingles.	Timber.	Wood.	Pulp wood.	Wood pulp.	Ashes, pot and pearl.
Albany.....	7,738	.....	.....	.....	.....	.....	.....
West Troy.....	635	.....	.....	168	.....	80	.....
Rome.....	1,889	.....	.....	4,847	.....	.....	.....
Syracuse.....	334	6	.....	1,028	.....	1,500	5,896
Rochester.....	.....	.....	.....	.....	.....	.....	.....
Tonawanda.....	34,432	.....	.....	.....	.....	.....	.....
Buffalo.....	118,941	.....	.....	.....	.....	.....	.....
Waterford.....	14,525	.....	.....	4,578	.....	.....	.....
Whitehall.....	27,805	.....	2,586	2,618	147,760	.....	.....
Oswego.....	1,324	6	.....	.....	21,071	.....	.....
Waterloo.....	.....	.....	.....	.....	.....	.....	.....
Boonville.....	2,865	.....	2,847	679	123	.....	.....
Total.....	210,488	12	5,433	13,918	168,954	1,580	5,896

*Way freight (in tons) going east, etc.—(Continued).*

OFFICES.	AGRICULTURE—VEGETABLE FOOD.					
	Flour.	Wheat.	Corn.	Barley.	Barley malt.	
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	.....	.....	.....	.....	.....	.....
Rome.....	.....	.....	.....	.....	.....	.....
Syracuse.....	17	3,345	.....	.....	.....	.....
Rochester.....	.....	.....	10,564	.....	.....	.....
Tonawanda.....	.....	.....	.....	.....	.....	.....
Buffalo.....	.....	57,832	59,182	7,621	.....	1,723
Waterford.....	.....	.....	.....	.....	.....	.....
Whitehall.....	.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	.....	.....	.....
Waterloo.....	.....	.....	.....	.....	.....	.....
Boonville.....	.....	.....	.....	.....	.....	.....
Total.....	17	61,177	69,746	7,621	.....	1,723

*Way freight (in tons) going east, etc.—(Continued).*

OFFICES.	AGRICULTURE—VEGETABLE FOOD.				All other agri- cultural pro- ducts—Hay.
	Oats.	Bran and ship stuffs.	Apples.	Potatoes.	
Albany.....	.....	.....	.....	.....	.....
West Troy.....	.....	.....	.....	.....	.....
Rome.....	.....	.....	.....	192	.....
Syracuse.....	55	21	1,070	114	.....
Rochester.....	.....	.....	923	114	.....
Tonawanda.....	.....	.....	.....	.....	.....
Buffalo.....	38,585	.....	.....	.....	.....
Waterford.....	.....	.....	270	2,265	.....
Whitehall.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	.....	.....
Watertown.....	.....	.....	.....	.....	.....
Boonville.....	.....	.....	.....	630	.....
Total.....	38,640.	21	2,263	3,315	3,550

*Way freight (in tons) going east, etc.—(Continued).*

OFFICES.	MANUFACTURES.				MERCHANDISE.			All other merchandise.
	Furniture.	Pig iron.	Castings and iron ware.	Domestic salt.	Sugar.	Iron and steel.	Flint, enamel crockery and glassware.	
Albany.....	.....	.....	.....	.....	.....	.....	.....	..... 34
West Troy.....	.....	.....	230	.....	.....	.....	.....	..... 3,165
Rome.....	.....	.....	.....	43,441	230	.....	.....	..... 13,052
Syracuse.....	50	.....	.....	23,038	.....	70	53	..... 5,922
Rochester.....	.....	.....	.....	.....	.....	.....	.....	.....
Tonawanda.....	.....	.....	.....	.....	.....	.....	.....	.....
Buffalo.....	.....	470	.....	.....	.....	.....	.....	..... 8,244
Waterford.....	.....	.....	.....	.....	.....	.....	.....	..... 2,803
Whitehall.....	.....	.....	.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	.....	.....	.....	.....	..... 20
Waterloo.....	.....	.....	.....	18,816	.....	.....	.....	..... 1,669
Boonville.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	50	470	230	85,295	230	70	53	34,909



*Way freight (in tons) going east, etc.—(Concluded).*

OFFICES.	OTHER ARTICLES.						Total tons.
	Ice.	Stone, lime and clay.	Rock and super-phosphate.	Anthracite coal.	Bituminous coal.	Petroleum.	Sundries.
Albany.....	.....	.....	.....	.....	.....	.....	896
West Troy.....	83,440	170,880	222	6,404	.....	.....	376
Rome.....	.....	55,590	.....	67,388	7,437	.....	.....
Syracuse.....	9,220	14,603	.....	38,020	19,659	123	880
Rochester.....	.....	19,804	.....	10,236	22,686	.....	280
Tonawanda.....	.....	4,481	.....	.....	.....	.....	.....
Buffalo.....	.....	369,604	.....	.....	.....	.....	.....
Waterford.....	24,240	33,545	.....	140	.....	.....	5,799
Whitehall.....	.....	27,895	.....	.....	.....	.....	388
Oswego.....	.....	18,889	.....	.....	.....	.....	.....
Watloo.....	.....	5,654	.....	.....	.....	.....	.....
Boonville.....	.....	47,070	.....	6,284	17,760	.....	.....
Total.....	116,900	768,015	222	128,472	67,542	123	8,619
							1,805,554

ANNUAL STATEMENT showing the total quantity (in tons of 2,000 lbs.) of way freight going west during the season of 1908.

OFFICES.	THE FOREST—PRODUCT OF WOOD.					
	Boards and scantling.	Timber.	Wood.	Pulp wood.	Wood pulp.	Ashes, pot and pearl.
Albany.....	6,723	120	280	.....	.....	.....
West Troy.....	3,947	1,240	890	.....	1,182	149
Rome.....	233	.....	.....	.....	.....	.....
Syracuse.....	1,151	.....	426	.....	.....	.....
Rochester.....	.....	.....	.....	.....	.....	.....
Tonawanda.....	267	.....	.....	.....	.....	.....
Buffalo.....	.....	.....	.....	.....	.....	.....
Waterford.....	1,150	.....	.....	.....	3,200	.....
Whitehall.....	53	.....	.....	224	.....	.....
Oswego.....	.....	.....	.....	.....	.....	.....
Waterloo.....	100	.....	.....	.....	.....	.....
Boonville.....	.....	371	56	.....	.....	.....
Total.....	13,624	1,731	1,652	224	4,382	149

*Way freight (in tons) going west, etc.—(Continued).*

OFFICES.	Product of animals.— Lard, tallow and lard oil.	AGRICULTURE—VEGETABLE FOOD.						
		Corn.	Barley.	Barley malt.	Oats.	Peas and beans.	Apples.	Dried fruit.
Albany.....	.....	.....	.....	.....	.....	.....	.....	.....
West Troy.....	154	.....	.....	.....	.....	18	.....	5
Rome.....	.....	955	.....	.....	2	.....	.....	.....
Syracuse.....	.....	.....	1,652	1,112	.....	.....	.....	.....
Rochester.....	.....	.....	.....	.....	.....	.....	37	.....
Tonawanda.....	.....	.....	.....	.....	.....	.....	.....	.....
Buffalo.....	.....	.....	.....	.....	.....	.....	.....	.....
Waterford.....	.....	.....	950	.....	.....	.....	.....	.....
Whitehall.....	.....	.....	.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	.....	.....	.....	.....	.....
Waterloo.....	.....	.....	2,379	.....	.....	.....	.....	.....
Boonville.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	154	955	2,602	3,491	2	18	37	5

*Way freight (in tons) going west, etc.—(Continued).*

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.			MANUFACTURERS.	
	Hemp.	Clover and grass seed.	Hay.	Domestic spirits.	Domestic salt.
Albany.....	.....	.....	.....	.....	.....
West Troy.....	1	1	.....	3	.....
Rome.....	.....	.....	.....	.....	14
Syracuse.....	.....	.....	84	.....	.....
Rochester.....	.....	.....	.....	.....	.....
Tonawanda.....	.....	.....	.....	.....	.....
Buffalo.....	.....	.....	.....	.....	.....
Waterford.....	.....	.....	.....	.....	.....
Whitehall.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	.....	.....
Waterloo.....	.....	.....	100	.....	.....
Boonville.....	.....	.....	.....	.....	.....
Total.....	1	1	184	3	14

*Way freight (in tons) going west, etc.—(Continued).*

OFFICES.	MERCHANDISE.					
	Sugar.	Molasses.	Coffee.	Iron and steel.	Flint, enamel crockery and glassware.	All other merchandise.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	20,461	200	84	.....	.....	6,990
Rome.....	.....	.....	.....	.....	.....	9,411
Syracuse.....	.....	.....	.....	110	2	12,251
Rochester.....	.....	.....	.....	.....	.....	8,157
Tonawanda.....	.....	.....	.....	.....	.....	66
Buffalo.....	.....	.....	.....	.....	.....	.....
Waterford.....	.....	.....	.....	.....	.....	5,987
Whitehall.....	.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	.....	.....	.....
Waterloo.....	.....	.....	.....	.....	.....	50
Boonville.....	.....	.....	.....	.....	.....	.....
Total.....	20,461	200	84	110	2	42,912

*Way freight (in tons) going west, etc.—(Concluded).*

OFFICES.	OTHER ARTICLES.							
	Ice.	Stone, lime and clay.	Rock and super-phos- phate.	Anthracite coal.	Bituminous coal.	Iron ore.	Sundries.	Total tons.
Albany.....	.....	918	297	.....	269	.....	.....	8,607
West Troy.....	250	79,472	13,177	45,840	2,509	1,623	2,432	180,628
Rome.....	.....	67,769	.....	16,810	1,642	.....	.....	96,836
Syracuse.....	5,525	21,401	.....	26,787	21,028	.....	1,922	93,451
Rochester.....	.....	15,127	.....	4,413	1,058	.....	115	28,870
Tonawanda.....	.....	34,755	.....	.....	.....	.....	.....	35,125
Buffalo.....	.....	.....	.....	.....	.....	.....	.....	.....
Waterford.....	.....	6,857	.....	46,126	27,228	.....	202	91,700
Whitehall.....	.....	941	.....	.....	.....	.....	.....	1,218
Oswego.....	.....	6,319	.....	.....	.....	.....	.....	6,319
Waterloo.....	.....	2,400	.....	1,131	4,916	.....	.....	11,076
Boonville.....	.....	.....	.....	.....	.....	.....	.....	427
Total.....	5,775	235,959	13,474	141,107	58,650	1,623	4,671	554,257

ANNUAL STATEMENT showing the total quantity (in tons of 2,000 lbs.) of way freight going east and west during the season of 1908.

OFFICES.	THE FOREST—PRODUCT OF WOOD.						
	Boards and scantling.	Shingles.	Timber.	Wood.	Pulp wood.	Wood pulp.	Ashes, pot and pearl.
Albany.....	14,461	.....	120	280	.....	.....	.....
West Troy.....	4,582	.....	1,240	1,058	.....	1,262	149
Rome.....	2,122	.....	.....	4,847	.....	.....	.....
Syracuse.....	1,485	6	.....	1,454	.....	1,500	5,896
Rochester.....	.....	.....	.....	.....	.....	.....	.....
Tonawanda.....	34,699	.....	.....	.....	.....	.....	.....
Buffalo.....	118,941	.....	.....	.....	.....	.....	.....
Waterford.....	15,675	.....	.....	4,578	.....	3,200	.....
Whitehall.....	27,858	.....	2,586	2,618	147,984	.....	.....
Oswego.....	1,324	6	.....	.....	21,071	.....	.....
Watloo.....	100	.....	.....	.....	.....	.....	.....
Boonville.....	2,865	.....	3,218	735	123	.....	.....
Total.....	224,112	12	7,164	15,570	169,178	5,962	6,045

*Way freight (in tons) going east and west, etc.—(Continued).*

OFFICES.	AGRICULTURE—VEGETABLE FOOD.					
	Agriculture— Product of animals— Lard, tallow and lard oil.	Flour.	Wheat.	Corn.	Barley.	Barley malt.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	154	.....	.....	.....	.....	.....
Rome.....	.....	.....	.....	955	.....	.....
Syracuse.....	.....	17	3,345	.....	1,652	1,112
Rochester.....	.....	.....	.....	10,564	.....	.....
Tonawanda.....	.....	.....	.....	.....	.....	.....
Buffalo.....	.....	.....	57,832	59,182	7,621	1,723
Waterford.....	.....	.....	.....	.....	950	.....
Whitehall.....	.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	.....	.....	.....
Waterloo.....	.....	.....	.....	.....	.....	2,379
Boonville.....	.....	.....	.....	.....	.....	.....
Total.....	154	17	61,177	70,701	10,223	5,214



*Way freight (in tons) going east and west, etc.—(Continued).*

OFFICES.	AGRICULTURE—VEGETABLE FOOD.					
	Oats.	Bran and ship stuffs	Peas and beans.	Apples.	Potatoes.	Dried fruit.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	.....	.....	.....	.....	.....	.....
Rome.....	2	.....	18	.....	192	.....
Syracuse.....	55	21	.....	1,070	114	.....
Rochester.....	.....	.....	.....	923	114	.....
Tonawanda.....	.....	.....	.....	37	.....	.....
Buffalo.....	38,585	.....	.....	.....	.....	.....
Waterford.....	.....	.....	.....	270	2,265	.....
Whitehall.....	.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	.....	.....	.....
Waterloo.....	.....	.....	.....	.....	.....	.....
Boonville.....	.....	.....	.....	.....	630	.....
Total.....	38,642	21	18	2,300	3,315	5

*Way freight (in tons) going east and west, etc.—(Continued).*

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.			MANUFACTURES.				
	Hemp.	Clover and grass seed.	Hay.	Domestic spirits.	Furniture.	Pig iron.	Castings and iron ware.	Domestic salt.
Albany.....	.....	.....	.....	.....	.....	.....	.....	.....
West Troy.....	1	1	3,027	3	.....	.....	230	.....
Rome.....	.....	.....	.....	.....	.....	.....	.....	14
Syracuse.....	.....	.....	84	.....	50	.....	.....	43,441
Rochester.....	.....	.....	200	.....	.....	.....	.....	23,038
Tonawanda.....	.....	.....	.....	.....	.....	.....	.....	.....
Buffalo.....	.....	.....	.....	.....	.....	470	.....	.....
Waterford.....	.....	.....	323	.....	.....	.....	.....	.....
Whitehall.....	.....	.....	.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	.....	.....	.....	.....	.....
Waterloo.....	.....	.....	100	.....	.....	.....	.....	18,816
Boonville.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	1	1	3,734	3	50	470	230	85,309

*Way freight (in tons) going east and west, etc.—(Continued).*

OFFICES.	MERCHANDISE.					OTHER ARTICLES.		
	Sugar.	Molasses.	Coffee.	Iron and steel.	Flint, enamel crockery and glassware.	All other merchandise.	Ice.	Stone, lime and clay.
Albany.....	.....	.....	.....	.....	.....	.....	.....	918
West Troy.....	20,461	200	84	.....	.....	7,024	83,690	250,352
Rome.....	230	.....	.....	.....	.....	12,576	.....	123,359
Syracuse.....	.....	.....	.....	180	55	25,303	14,745	36,004
Rochester.....	.....	.....	.....	.....	.....	14,079	.....	34,931
Tonawanda.....	.....	.....	.....	.....	.....	66	.....	39,236
Buffalo.....	.....	.....	.....	.....	.....	8,244	.....	369,604
Waterford.....	.....	.....	.....	.....	.....	8,790	24,240	40,402
Whitehall.....	.....	.....	.....	.....	.....	.....	.....	28,836
Oswego.....	.....	.....	.....	.....	.....	20	.....	25,208
Watertown.....	.....	.....	.....	.....	.....	1,719	.....	8,054
Boonville.....	.....	.....	.....	.....	.....	.....	.....	47,070
Total.....	20,691	200	84	180	55	77,821	122,675	1,003,974

*Way freight (in ton) going east and west, etc.—(Concluded.)*

OFFICES.	OTHER ARTICLES.						Total tons.
	Rock and super-phosphate.	Anthracite coal.	Bituminous coal.	Petroleum.	Iron ore.	Sundries.	
Albany.....	297	.....	269	.....	.....	896	17,241
West Troy.....	13,399	52,244	2,509	.....	1,623	2,808	446,124
Rome.....	.....	84,198	9,079	123	.....	.....	237,697
Syracuse.....	.....	64,807	40,687	.....	.....	2,802	245,885
Rochester.....	.....	14,649	23,744	.....	.....	395	122,637
Tonawanda.....	.....	.....	.....	.....	.....	.....	74,038
Buffalo.....	.....	.....	.....	.....	.....	.....	622,202
Waterford.....	.....	46,266	27,228	.....	.....	6,001	180,188
Whitehall.....	.....	.....	.....	.....	.....	388	210,270
Oswego.....	.....	.....	.....	.....	.....	.....	47,629
Watertown.....	.....	7,415	22,676	.....	.....	.....	61,259
Boonville.....	.....	.....	.....	.....	.....	.....	54,641
Total.....	13,696	269,579	126,192	123	1,623	13,290	2,359,811

ANNUAL STATEMENT showing the total quantity (in tons of 2,000 lbs.) of through freight going east during the season of 1908.

OFFICES.	THE FOREST—PRODUCT OF WOOD.		AGRICULTURE—VEGETABLE FOOD.			
	Boards and scantling.	Wood.	Wheat.	Rye.	Barley.	Barley malt.
Tonawanda.....	66,370	.....	.....	.....	.....	.....
Buffalo.....	333	.....	122,489	2,112	37,784	6,825
Whitehall.....	63,554	179	.....	.....	.....	.....
Total.....	130,257	179	122,489	2,112	37,784	6,825

*Through freight (in tons) going east, etc.—(Continued).*

OFFICES.	AGRICULTURE—VEGETABLE FOOD.			ALL OTHER AGRICULTURAL PRODUCTS.		Manufactures —Pig iron.
	Oats.	Apples.	Potatoes.	Flax seed.	Hay.	
Tonawanda.....	.....	.....	.....	.....	.....	11,815
Buffalo.....	22,369	.....	.....	55,142	.....	6,887
Whitehall.....	.....	107	726	.....	2,233	.....
Total.....	22,369	107	726	55,142	2,233	18,702

*Through freight (in tons) going east, etc.—(Concluded).*

OFFICES.	MERCHANDISE.		OTHER ARTICLES.			Total tons.
	Iron and steel.	All other merchandise.	Stone, lime and clay.	Iron ore.	Sundries.	
Tonawanda.....	.....	.....	.....	.....	.....	78,185
Buffalo.....	459	2	.....	.....	.....	254,402
Whitehall.....	.....	1,179	196	27,418	635	96,227
Total.....	459	1,181	196	27,418	635	428,814

*ANNUAL STATEMENT showing the total quantity (in tons of 2,000 lbs.) of through freight going west during  
the season of 1908.*

OFFICES.	THE FOREST—PRODUCT OF WOOD.				Product of animals— Lard, tallow and lard oil.	AGRICULTURE.	
	Boards and scantling.	Wood.	Wood pulp.	Ashes, pot and pearl.		Peas and beans.	Dried fruit.
Albany.....	250	.....	.....	.....	.....	.....	.....
West Troy.....	3,385	45	785	354	1,264	747	54
Waterford.....	975	.....	1,170	.....	.....	.....	.....
Total.....	4,610	45	1,955	354	1,264	747	54



*Through freight (in tons) going west, etc.—(Continued).*

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.		MANUFACTURES.				
	Hemp.	Clover and grass seed.	Domestic spirits.	Bloom and bar iron.	Domestic woolens.	Domestic salt.	Foreign salt.
Albany.....	.....	.....	.....	.....	.....	.....	.....
West Troy.....	2,284	187	89	96	68	.....	.....
Waterford.....	.....	.....	.....	848	.....	326	180
Total.....	2,284	187	89	944	68	326	180



*Through freight (in tons) going west, etc.—(Concluded).*

OFFICES.	OTHER ARTICLES.						Total tons.
	Stone, lime and clay	Rock and super- phosphate.	Anthracite coal.	Bituminous coal.	Iron ore.	Sundries.	
Albany.....	720	.....	.....	.....	.....	947	1,917
West Troy.....	35,200	6,718	.....	.....	103	24,371	133,258
Waterford.....	13,680	.....	88,996	14,020	.....	.....	128,077
Total.....	49,600	6,718	88,996	14,020	103	25,318	263,252

ANNUAL STATEMENT showing the total quantity (in tons of 2,000 lbs.) of through freight going east and west during the season of 1908.

OFFICES.	THE FOREST—PRODUCT OF WOOD.				Product of animals—Lard, tallow and lard oil.	AGRICULTURE—VEGETABLE FOOD.	
	Boards and scantling.	Wood.	Wood pulp.	Ashes, pot and pearl.		Wheat.	Rye.
Albany.....	250	.....	.....	.....	.....	.....	.....
West Troy.....	3,385	45	785	354	1,264	.....	.....
Tonawanda.....	66,370	.....	.....	.....	.....	.....	.....
Buffalo.....	333	.....	.....	.....	.....	122,489	2,112
Waterford.....	975	.....	1,170	.....	.....	.....	.....
Whitehall.....	63,554	179	.....	.....	.....	.....	.....
Total.....	134,867	224	1,955	354	1,264	122,489	2,112

*Through freight (in tons) going east and west, etc.—(Continued).*

OFFICES.	AGRICULTURE—VEGETABLE FOOD.						
	Barley.	Barley malt.	Oats.	Peas and beans.	Apples.	Potatoes.	Dried fruit.
Albany.....	.....	.....	.....	.....	.....	.....	.....
West Troy.....	.....	.....	.....	747	.....	.....	54
Tonawanda.....	.....	.....	.....	.....	.....	.....	.....
Buffalo.....	37,784	6,825	22,369	.....	.....	.....	.....
Waterford.....	.....	.....	.....	.....	.....	.....	.....
Whitehall.....	.....	.....	.....	.....	107	726	.....
Total.....	37,784	6,825	22,569	747	107	726	54

*Through freight (in tons) going east and west, etc.—(Continued).*

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.			
	Hemp.	Clover and grass seed.	Flax seed.	Hay.
Albany.....	.....	.....	.....	.....
West Troy.....	.....	.....	.....	.....
Tonawanda.....	2,284	187	.....	.....
Buffalo.....	.....	.....	55,142	.....
Waterford.....	.....	.....	.....	.....
Whitehall.....	.....	.....	.....	2,233
Total.....	2,284	187	55,142	2,233

*Through freight (in tons) going east and west, etc.—(Continued).*

OFFICES.	MANUFACTURES.					
	Domestic spirits.	Pig iron.	Bloom and bar iron.	Domestic woollens.	Domestic salt.	Foreign salt.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	89	.....	96	68	.....	.....
Tonawanda.....	.....	11,815	.....	.....	.....	.....
Buffalo.....	.....	6,887	.....	.....	.....	.....
Waterford.....	.....	.....	848	.....	326	180
Whitehall.....	.....	.....	.....	.....	.....	.....
Total.....	89	18,702	944	68	326	180

*Through freight (in tons) going east and west, etc.—(Continued).*

OFFICES.	MERCHANDISE.					
	Sugar.	Molasses.	Coffee.	Iron and steel.	Flint, enamel crockery and glassware.	All other merchandise.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	19,365	916	2,029	190	3	35,005
Tonawanda.....	.....	.....	.....	.....	.....	.....
Buffalo.....	.....	.....	.....	459	.....	2
Waterford.....	.....	.....	.....	.....	.....	7,882
Whitehall.....	.....	.....	.....	.....	.....	1,179
Total.....	19,365	916	2,029	649	3	44,068



*Through freight (in tons) going east and west, etc.—(Concluded).*

OFFICES.	OTHER ARTICLES.						Total tons.
	Stone, lime and clay.	Rock and super- phosphate.	Anthracite coal.	Bituminous coal.	Iron ore.	Sundries.	
Albany.....	720	.....	.....	.....	.....	947	1,917
West Troy.....	35,200	6,718	.....	.....	103	24,371	133,258
Tonawanda.....	.....	.....	.....	.....	.....	.....	78,185
Buffalo.....	.....	.....	.....	.....	.....	.....	254,402
Waterford.....	13,680	.....	88,996	14,020	.....	.....	128,077
Whitehall.....	196	.....	.....	.....	27,418	635	96,227
Total.....	49,796	6,718	88,996	14,020	27,521	25,953	692,066

*Total tons carried on the canals during the season of 1908.*

OFFICES.	THE FOREST—PRODUCT OF WOOD.						
	Boards and scantling.	Shingles.	Timber.	Wood.	Pulp wood.	Wood pulp.	Ashes, pot and pearl.
Albany.....	14,711	.....	120	280	.....	.....	.....
West Troy.....	7,967	.....	1,240	1,103	.....	2,047	503
Rome.....	2,122	.....	.....	4,847	.....	.....	.....
Syracuse.....	1,485	6	.....	1,454	.....	1,500	5,896
Rochester.....	.....	.....	.....	.....	.....	.....	.....
Tonawanda.....	101,069	.....	.....	.....	.....	.....	.....
Buffalo.....	119,274	.....	.....	.....	.....	.....	.....
Waterford.....	16,650	.....	.....	4,578	.....	4,370	.....
Whitehall.....	91,412	.....	2,586	2,797	147,984	.....	.....
Oswego.....	1,324	6	.....	.....	21,071	.....	.....
Watloo.....	100	.....	.....	.....	.....	.....	.....
Boonville.....	2,865	.....	3,218	735	123	.....	.....
Total.....	358,979	12	7,164	15,794	169,178	7,917	6,399

*Total tons carried on the canals, etc.—(Continued).*

OFFICES.	Agriculture— Product of animals— lard, tallow and lard oil.	AGRICULTURE—VEGETABLE FOOD.				
		Flour.	Wheat.	Rye.	Corn.	Barley.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	1,418	.....	.....	.....	.....	.....
Rome.....	.....	.....	.....	.....	955	.....
Syracuse.....	.....	17	3,345	.....	.....	1,652
Rochester.....	.....	.....	.....	.....	10,564	.....
Tonawanda.....	.....	.....	.....	.....	.....	.....
Buffalo.....	.....	.....	180,321	2,112	59,182	45,405
Waterford.....	.....	.....	.....	.....	.....	950
Whitehall.....	.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	.....	.....	.....
Waterloo.....	.....	.....	.....	.....	.....	.....
Boonville.....	.....	.....	.....	.....	.....	.....
Total.....	1,418	17	183,666	2,112	70,701	48,007

*Total tons carried on the canals, etc.—(Continued).*

OFFICES.	AGRICULTURE—VEGETABLE FOOD.						
	Barley malt:	Oats.	Brand and ship stuffs.	Peas and beans.	Apples.	Potatoes.	Dried fruit.
Albany.....	.....	.....	.....	.....	.....	.....	.....
West Troy.....	.....	.....	.....	.....	.....	.....	.....
Rome.....	.....	2	.....	765	.....	192	59
Syracuse.....	1,112	55	21	.....	1,070	114	.....
Rochester.....	.....	.....	.....	.....	923	114	.....
Tonawanda.....	.....	.....	.....	.....	37	.....	.....
Buffalo.....	8,548	60,954	.....	.....	.....	.....	.....
Waterford.....	.....	.....	.....	.....	270	2,265	.....
Whitehall.....	.....	.....	.....	.....	107	726	.....
Oswego.....	.....	.....	.....	.....	.....	.....	.....
Waterloo.....	.....	.....	.....	.....	.....	.....	.....
Boonville.....	2,379	.....	.....	.....	.....	630	.....
Total.....	12,039	61,011	21	765	2,407	4,041	59

*Total tons carried on the canals, etc.—(Continued).*

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.				MANUFACTURES.	
	Hemp.	Clover and grass seed.	Flax seed.	Hay.	Domestic spirits.	Furniture.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	2,285	188	.....	3,027	92	.....
Rome.....	.....	.....	.....	.....	.....	.....
Syracuse.....	.....	.....	.....	84	.....	50
Rochester.....	.....	.....	.....	200	.....	.....
Tonawanda.....	.....	.....	.....	.....	.....	.....
Buffalo.....	.....	.....	55,142	.....	.....	.....
Waterford.....	.....	.....	.....	323	.....	.....
Whitehall.....	.....	.....	.....	2,233	.....	.....
Oswego.....	.....	.....	.....	.....	.....	.....
Waterloo.....	.....	.....	.....	100	.....	.....
Boonville.....	.....	.....	.....	.....	.....	.....
Total.....	2,285	188	55,142	5,967	92	50

*Total tons carried on the canals, etc.—(Continued).*

OFFICES.	MANUFACTURES.					
	Pig iron.	Bloom and bar iron.	Castings and iron ware.	Domestic woolens.	Domestic salt.	Foreign salt.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	.....	96	230	68	.....	.....
Rome.....	.....	.....	.....	.....	14	.....
Syracuse.....	.....	.....	.....	.....	43,441	.....
Rochester.....	.....	.....	.....	.....	23,038	.....
Tonawanda.....	11,815	.....	.....	.....	.....	.....
Buffalo.....	7,357	.....	.....	.....	.....	.....
Waterford.....	.....	848	.....	.....	326	180
Whitehall.....	.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	.....	.....	.....
Waterloo.....	.....	.....	.....	.....	18,816	.....
Boonville.....	.....	.....	.....	.....	.....	.....
Total.....	19,172	944	230	68	85,635	180

*Total tons carried on the canals, etc.—(Continued).*

OFFICES.	MERCHANDISE.						OTHER ARTICLES.	
	Sugar.	Molasses.	Coffee.	Iron and steel.	Flint, enamel crockery and glassware.	All other merchandise.	Ice.	Stone, lime and clay.
Albany.....	.....	.....	.....	.....	.....	.....	.....	1,638
West Troy.....	39,826	1,116	2,113	190	3	42,029	83,690	285,552
Rome.....	230	.....	.....	.....	.....	12,576	.....	123,359
Syracuse.....	.....	.....	.....	180	55	25,303	14,745	36,004
Rochester.....	.....	.....	.....	.....	.....	14,079	.....	34,931
Tonawanda.....	.....	.....	.....	.....	.....	66	.....	39,236
Buffalo.....	.....	.....	.....	459	.....	8,246	.....	369,604
Waterford.....	.....	.....	.....	.....	.....	16,672	24,240	54,082
Whitehall.....	.....	.....	.....	.....	.....	1,179	.....	29,032
Oswego.....	.....	.....	.....	.....	.....	20	.....	25,208
Waterloo.....	.....	.....	.....	.....	.....	1,719	.....	8,054
Boonville.....	.....	.....	.....	.....	.....	.....	.....	47,070
Total.....	40,056	1,116	2,113	829	58	121,889	122,675	1,053,770

*Total tons carried on the canals, etc.—(Concluded).*

OFFICES.	OTHER ARTICLES.						Total tons.
	Rock and super-phosphate.	Anthracite coal.	Bituminous coal.	Petroleum.	Iron ore.	Sundries.	
Albany.....	297	.....	269	.....	.....	1,843	19,158
West Troy.....	20,117	52,244	2,509	.....	1,726	27,179	579,382
Rome.....	.....	84,198	9,079	123	.....	.....	237,697
Syracuse.....	.....	64,807	40,687	.....	.....	2,802	245,885
Rochester.....	.....	14,649	23,744	.....	.....	395	122,637
Tonawanda.....	.....	.....	.....	.....	.....	.....	152,223
Buffalo.....	.....	.....	.....	.....	.....	.....	916,604
Waterford.....	.....	135,262	41,248	.....	.....	6,001	308,265
Whitehall.....	.....	.....	.....	.....	27,418	1,023	306,497
Oswego.....	.....	.....	.....	.....	.....	.....	47,629
Watloo.....	.....	7,415	22,676	.....	.....	.....	61,259
Boonville.....	.....	.....	.....	.....	.....	.....	54,641
Total.....	20,414	358,575	140,212	123	29,144	39,243	3,051,877



*Value of all property carried on the canals during the season of 1908.*

OFFICES.	THE FOREST—PRODUCT OF WOOD.						
	Boards and scantling.	Shingles.	Timber.	Wood.	Pulp wood.	Wood pulp.	Ashes, pot and pearly.
Albany.....	\$264,805	.....	\$1,620	\$400	.....	.....	.....
West Troy.....	143,412	.....	16,740	1,576	.....	\$40,916	\$18,310
Rome.....	38,189	.....	.....	6,924	.....	.....	.....
Syracuse.....	29,425	\$175	.....	2,076	.....	30,000	214,390
Rochester.....	.....	.....	.....	.....	.....	.....	.....
Tonawanda.....	1,819,238	.....	.....	.....	.....	.....	.....
Buffalo.....	2,146,948	.....	.....	.....	.....	.....	.....
Waterford.....	299,703	.....	.....	6,540	.....	87,392	.....
Whitehall.....	1,645,398	.....	34,911	3,996	\$813,912	.....	.....
Oswego.....	23,826	175	.....	.....	115,888	.....	.....
Waterloo.....	1,800	.....	.....	.....	.....	.....	.....
Boonville.....	51,564	.....	43,450	1,052	677	.....	.....
Total.....	\$6,464,308	\$350	\$96,721	\$22,564	\$930,477	\$158,308	\$232,700

*Value of all property carried on the canals, etc.—(Continued).*

OFFICES.	Product of animals— Lard, tallow and lard oil.	AGRICULTURE—VEGETABLE FOOD.				
		Flour.	Wheat.	Rye.	Corn.	Barley.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	\$226,744	.....	.....	.....	.....	.....
Rome.....	.....	.....	.....	.....	\$25,575	.....
Syracuse.....	.....	\$972	\$122,643	.....	.....	\$46,673
Rochester.....	.....	.....	.....	.....	282,980	.....
Tonawanda.....	.....	.....	.....	.....	.....	.....
Buffalo.....	.....	.....	6,611,779	\$63,378	1,585,245	1,172,965
Waterford.....	.....	.....	.....	.....	.....	24,552
Whitehall.....	.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	.....	.....	.....
Waterloo.....	.....	.....	.....	.....	.....	.....
Boonville.....	.....	.....	.....	.....	.....	.....
Total.....	\$226,744	\$972	\$6,734,422	\$63,378	\$1,893,800	\$1,240,190

*Value of all property carried on the canals, etc.—(Continued).*

OFFICES.	AGRICULTURE—VEGETABLE FOOD.					
	Barley malt.	Oats	Bran and ship stuff.	Peas and beans.	Apples.	Potatoes.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	.....	.....	.....	.....	.....	.....
Rome.....	.....	\$52	.....	\$57,425	.....	\$4,480
Syracuse.....	\$52,320	1,789	\$630	.....	\$37,668	2,660
Rochester.....	.....	.....	.....	.....	32,500	2,660
Tonawanda.....	.....	.....	.....	.....	1,303	.....
Buffalo.....	402,320	1,981,027	.....	.....	.....	.....
Waterford.....	.....	.....	.....	.....	9,500	52,850
Whitehall.....	.....	.....	.....	.....	3,750	16,940
Oswego.....	.....	.....	.....	.....	.....	.....
Waterloo.....	111,977	.....	.....	.....	.....	.....
Boonville.....	.....	.....	.....	.....	.....	14,700
Total.....	\$566,617	\$1,982,868	\$630	\$57,425	\$84,721	\$94,290
						\$11,710

*Value of all property carried on the canals, etc.—(Continued).*

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.				MANUFACTURES.	
	Hemp.	Clover and grass seed.	Flax seed.	Hay.	Domestic spirits.	Furniture.
Albany.....	\$365,544	\$22,536	.....	\$45,404	\$29,024	.....
West Troy.....	.....	.....	.....	.....	.....	.....
Rome.....	.....	.....	.....	1,260	.....	\$20,000
Syracuse.....	.....	.....	.....	3,000	.....	.....
Rochester.....	.....	.....	.....	.....	.....	.....
Tonawanda.....	.....	.....	\$2,205,719	.....	.....	.....
Buffalo.....	.....	.....	.....	4,844	.....	.....
Waterford.....	.....	.....	.....	33,498	.....	.....
Whitehall.....	.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	1,500	.....	.....
Waterloo.....	.....	.....	.....	.....	.....	.....
Boonville.....	.....	.....	.....	.....	.....	.....
Total.....	\$365,544	\$22,536	\$2,205,719	\$89,506	\$29,024	\$20,000

*Value of all property carried on the canals, etc.—(Continued).*

OFFICES.	MANUFACTURES.				MERCHANDISE.	
	Pig iron.	Bloom and bar iron.	Castings and iron ware.	Domestic woollens.	Domestic salt.	Foreign salt.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	.....	\$2,889	\$13,776	\$68,100	.....	.....
Rome.....	.....	.....	.....	.....	\$140	.....
Syracuse.....	.....	.....	.....	.....	434,401	.....
Rochester.....	.....	.....	.....	.....	230,375	.....
Tonawanda.....	\$236,292	.....	.....	.....	.....	.....
Buffalo.....	148,148	.....	.....	.....	.....	.....
Waterford.....	.....	25,440	.....	.....	3,263	\$3,600
Whitehall.....	.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	.....	.....	.....
Watertown.....	.....	.....	.....	.....	188,164	.....
Boonville.....	.....	.....	.....	.....	.....	.....
Total.....	\$384,440	\$28,329	\$13,776	\$68,100	\$856,343	\$3,600

*Value of all property carried on the canals, etc.—(Continued).*

OFFICES.	MERCHANDISE.				
	Sugar.	Molasses.	Coffee.	Iron and steel.	Flint, enamel crockery and glassware.*
Albany.....					All other merchandise.
West Troy.....	\$3,982,545	\$66,972	\$422,560	\$7,588	\$5,043,516
Rome.....	23,040				1,509,026
Syracuse.....				7,200	3,036,240
Rochester.....					1,689,420
Tonawanda.....					7,890
Buffalo.....				18,360	989,560
Waterford.....					2,000,616
Whitehall.....					141,482
Oswego.....					240,000
Waterloo.....					206,220
Boonville.....					
Total.....	\$4,005,585	\$66,972	\$422,560	\$33,148	\$14,863,970

*Value of all property carried on the canals, etc.—(Continued).*

OFFICES.	OTHER ARTICLES.			
	Ice.	Stone, lime and clay.	Rock and super-phosphate.	Anthracite coal.
Albany.....	.....	4,095	\$2,968	.....
West Troy.....	\$209,225	\$713,878	201,170	\$261,219
Rome.....	.....	308,386	.....	420,988
Syracuse.....	36,863	90,010	.....	324,036
Rochester.....	.....	87,327	.....	73,246
Tonawanda.....	.....	98,090	.....	.....
Buffalo.....	.....	924,010	.....	.....
Waterford.....	60,600	135,205	.....	676,308
Whitehall.....	.....	72,579	.....	.....
Oswego.....	.....	63,006	.....	.....
Watertown.....	.....	20,135	.....	37,074
Boonville.....	.....	117,675	.....	.....
Total.....	\$306,688	\$2,634,396	\$204,138	\$1,792,871

*Value of all property carried on the canals, etc.—(Concluded).*

OFFICES.	OTHER ARTICLES.				
	Bituminous coal.	Petroleum.	Iron ore.	Sundries.	Total value.
Albany.....	\$672	.....	.....	\$221,127	\$495,687
West Troy.....	6,274	.....	\$8,632	3,261,498	15,250,383
Rome.....	22,695	\$2,820	.....	.....	2,362,315
Syracuse.....	101,716	.....	.....	336,212	4,947,159
Rochester.....	59,358	.....	.....	47,412	2,508,278
Tonawanda.....	.....	.....	.....	.....	2,162,813
Buffalo.....	.....	.....	.....	.....	18,249,459
Waterford.....	103,120	.....	.....	720,024	4,213,557
Whitehall.....	.....	.....	137,088	122,732	3,026,286
Oswego.....	.....	.....	.....	.....	442,895
Waterloo.....	56,689	.....	.....	.....	623,559
Boonville.....	.....	.....	.....	.....	229,118
Total.....	\$350,524	\$2,820	\$145,720	\$4,709,005	\$54,511,509



*Property (in tons of 2,000 lbs.) left at and between offices on the canals during the season of 1908.*

OFFICES.	THE FOREST—PRODUCT OF WOOD.						
	Boards and scantling.	Shingles.	Timber.	Wood.	Pulp wood.	Wood pulp.	Ashes, pot and pearl.
Albany.....	38,460	.....	146	280	.....	.....	.....
West Troy.....	46,194	.....	1,240	1,058	.....	2,446	5,885
Rome.....	6,219	.....	.....	5,569	.....	.....	.....
Syracuse.....	6,260	6	.....	1,453	.....	750	.....
Rochester.....	14,303	.....	.....	.....	.....	.....	.....
Tonawanda.....	20,678	.....	.....	.....	.....	.....	.....
Buffalo.....	119,318	.....	.....	.....	.....	854	.....
Waterford.....	78,868	.....	.....	4,757	.....	3,200	.....
Whitehall.....	28,750	.....	2,586	2,618	147,984	666	.....
Oswego.....	.....	.....	.....	.....	21,071	.....	.....
Waterloo.....	100	.....	.....	.....	.....	.....	.....
Boonville.....	13	.....	299	56	.....	.....	.....
Total.....	359,163	6	4,271	15,791	169,055	7,916	5,885

*Property (in tons of 2,000 pounds) left at and between offices on the canals, etc.—(Continued).*

OFFICES.	Agriculture— Product of animals— Lard, tallow and lard oil.	AGRICULTURE—VEGETABLE FOOD.				
		Flour.	Wheat.	Rye.	Corn.	Barley.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	.....	.....	122,218	2,113	.....	36,837
Rome.....	.....	13	.....	.....	2,725	.....
Syracuse.....	.....	.....	3,400	.....	.....	1,503
Rochester.....	.....	.....	34,317	.....	10,565	960
Tonawanda.....	.....	.....	.....	.....	.....	.....
Buffalo.....	1,073	.....	5,703	.....	52,192	4,524
Waterford.....	.....	.....	.....	.....	.....	950
Whitehall.....	.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	.....	.....	687
Waterloo.....	.....	.....	.....	.....	5,522	.....
Boonville.....	.....	.....	.....	.....	.....	.....
Total.....	1,073	13	165,638	2,113	71,004	45,461

*Property (in tons of 2,000 pounds) left at and between offices on the canals, etc.—(Continued).*

OFFICES.	AGRICULTURE—VEGETABLE FOOD.					
	Barley malt.	Oats.	Peas and beans.	Apples.	Potatoes.	Dried fruit.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	6,826	22,759	.....	480	750	.....
Rome.....	.....	807	.....	.....	1,452	.....
Syracuse.....	3,519	55	.....	547	.....	.....
Rochester.....	.....	.....	.....	.....	.....	.....
Tonawanda.....	.....	.....	.....	.....	.....	.....
Buffalo.....	.....	37,360	727	.....	.....	53
Waterford.....	.....	.....	.....	377	2,991	.....
Whitehall.....	.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	.....	.....	.....
Watloo.....	2,379	.....	.....	.....	.....	.....
Boonville.....	.....	.....	.....	45	.....	.....
Total.....	12,724	60,981	727	1,449	5,193	53

*Property (in tons of 2,000 pounds) left at and between offices on the canals, etc.—(Continued).*

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.			
	Hemp.	Clover and grass seed.	Flax seed.	Hay.
Albany.....	.....	.....	.....	.....
West Troy.....	.....	.....	55,073	3,027
Rome.....	.....	.....	.....	.....
Syracuse.....	.....	.....	.....	84
Rochester.....	.....	.....	.....	200
Tonawanda.....	.....	.....	.....	.....
Buffalo.....	249	217	.....	.....
Waterford.....	.....	.....	.....	2,475
Whitehall.....	.....	.....	.....	.....
Oswego.....	.....	.....	.....	.....
Waterloo.....	.....	.....	.....	100
Boonville.....	.....	.....	.....	.....
Total.....	249	217	55,073	5,886

*Property (in tons of 2,000 pounds) left at and between offices on the canals, etc.—(Continued).*

OFFICES.	MANUFACTURES.					
	Domestic spirits.	Furniture.	Pig iron.	Bloom and bar iron.	Castings and iron ware.	Domestic salt.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	.....	.....	18,391	.....	265	62,328
Rome.....	1	.....	.....	.....	.....	273
Syracuse.....	.....	50	.....	.....	.....	23,042
Rochester.....	.....	.....	.....	.....	.....	.....
Tonawanda.....	.....	.....	.....	.....	.....	.....
Buffalo.....	69	.....	.....	.....	.....	.....
Waterford.....	.....	.....	.....	.....	.....	.....
Whitehall.....	.....	.....	.....	848	.....	326
Oswego.....	.....	.....	.....	.....	.....	.....
Watertown.....	.....	.....	.....	.....	.....	.....
Boonville.....	.....	.....	.....	.....	.....	14
Total.....	70	50	18,391	848	265	85,983
						180

*Property (in tons of 2,000 pounds) left at and between offices on the canals, etc.—(Continued).*

OFFICES.	MERCHANDISE.					
	Sugar.	Molasses	Coffee.	Iron and steel.	Flint, enamel crockery and glassware.	All other merchandise.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	4,593	.....	.....	459	.....	1,791
Rome.....	2,505	59	47	470	.....	36,967
Syracuse.....	6,198	44	.....	50	2	29,426
Rochester.....	7,002	110	.....	80	.....	15,762
Tonawanda.....	.....	.....	.....	.....	.....	.....
Buffalo.....	19,042	803	1,882	279	3	37,186
Waterford.....	.....	.....	.....	.....	.....	10,147
Whitehall.....	.....	.....	.....	.....	.....	7,866
Oswego.....	.....	.....	.....	.....	.....	20
Waterloo.....	.....	.....	.....	.....	.....	1,631
Boonville.....	.....	.....	.....	.....	.....	347
Total.....	39,340	1,016	1,929	1,338	5	141,143

*Property (in tons of 2,000 pounds) left at and between offices on the canals, etc.—(Continued).*

	OTHER ARTICLES.			
	Ice.	Stone, lime and clay.	Rock and super-phosphate.	Anthracite coal.
Albany.....	.....	918	.....	.....
West Troy.....	83,690	222,782	2,226	51,914
Rome.....	.....	141,824	.....	84,249
Syracuse.....	14,745	71,669	513	33,803
Rochester.....	.....	44,648	10,483	15,314
Tonawanda.....	.....	28,381	.....	.....
Buffalo.....	.....	389,223	6,870	.....
Waterford.....	24,240	40,598	.....	46,266
Whitehall.....	.....	45,073	.....	87,886
Oswego.....	.....	25,982	.....	.....
Waterloo.....	.....	10,744	.....	8,998
Boonville.....	.....	190	.....	2
Total.....	122,675	1,022,032	20,092	328,432

*Property (in tons of 2,000 pounds) left at and between offices on the canals, etc.—(Concluded).*

OFFICES.	OTHER ARTICLES.				Total tons.
	Bituminous coal.	Petroleum.	Iron ore.	Sundries.	
Albany.....	269	.....	.....	588	40,661
West Troy.....	2,817	.....	.....	1,457	759,619
Rome.....	33,996	123	1,454	28	318,781
Syracuse.....	51,130	.....	.....	3,939	252,188
Rochester.....	2,149	.....	.....	373	156,266
Tonawanda.....	.....	.....	.....	8,208	57,267
Buffalo.....	.....	.....	.....	27,296	704,923
Waterford.....	27,228	.....	26,208	6,458	274,763
Whitehall.....	13,391	.....	.....	388	338,562
Oswego.....	.....	.....	.....	.....	47,760
Waterloo.....	6,695	.....	.....	.....	36,169
Boonville.....	43	.....	.....	.....	1,009
Total.....	137,718	123	27,662	48,735	2,987,968



*Property (in tons of 2,000 lbs.) arriving at tide-water from the Erie canal during the season of 1908.*

OFFICES.	THE FOREST—PRODUCT OF WOOD.				AGRICULTURE—VEGETABLE FOOD.		
	Boards and scantling.	Wood.	Wood pulp.	Ashes, pot and pearl.	Wheat.	Rye.	Barley.
Albany.....	23,527	.....	.....	.....	.....	.....	.....
West Troy.....	42,622	168	830	5,885	122,218	2,113	36,837
Total.....	66,149	168	830	5,885	122,218	2,113	36,837

*Property (in tons of 2,000 pounds) arriving at tide-water from the Erie canal, etc.—(Continued).*

OFFICES.	AGRICULTURE—VEGETABLE FOOD.				ALL OTHER AGRICULTURAL PRODUCTS.	
	Barley malt.	Oats.	Apples.	Potatoes.	Flax seed.	Hay.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	6,826	22,759	480	750	55,073	3,027
Total.....	6,826	22,759	480	750	55,073	3,027

*Property (in tons of 2,000 pounds) arriving at tide-water from the Erie canal, etc.—(Continued).*

OFFICES.	MANUFACTURES.			MERCHANDISE.	
	Pig iron.	Castings and iron ware.	Domestic salt.	Iron and steel.	All other merchandise.
Albany.....	.....	.....	.....	.....	.....
West Troy.....	18,391	265	62,328	459	261
Total.....	18,391	265	62,328	459	261

*Property (in tons of 2,000 pounds) arriving at tide-water from the Erie canal, etc.—(Concluded).*

OFFICES.	OTHER ARTICLES.						Total tons.
	Ice.	Stone, lime and clay.	Rock and super- phosphate.	Anthracite coal.	Bituminous coal.	Sundries.	
Albany.....	.....	.....	.....	.....	.....	.....	23,527
West Troy.....	83,440	176,526	532	6,074	308	1,301	649,473
Total.....	83,440	176,526	532	6,074	308	1,301	673,000

*Property (in tons of 2,000 lbs.) arriving at tide-water from the Champlain canal during the season of 1908.*

OFFICE.	THE FOREST—PRODUCT OF WOOD.		AGRICULTURE—VEGETABLE FOOD.		All other agricultural products—Hay.
	Boards and scantling.	Wood.	Apples.	Potatoes.	
Waterford .....	77,718	4,757	376	2,991	2,475

*Property (in tons of 2,000 pounds) arriving at tide-water from the Champlain canal, etc.—(Concluded).*

OFFICE.	All other merchandise.	OTHER ARTICLES.				Total tons.
		Ice.	Stone, lime and clay.	Iron ore.	Sundries.	
Waterford.....	4,160	24,240	33,741	26,207	6,255	182,920

*Property (in tons of 2,000 lbs.) arriving at tide-water from all canals during the season of 1908.*

OFFICES.	THE FOREST—PRODUCT OF WOOD.			
	Boards and scantling.	Wood.	Wood pulp.	Ashes, pot and pearl.
Albany.....	23,527	.....	.....	.....
West Troy.....	42,622	168	830	5,885
Waterford.....	77,718	4,757	.....	.....
Total.....	143,867	4,925	830	5,885

*Property (in tons of 2,000 pounds) arriving at tide-water from all canals, etc.—(Continued).*

OFFICES.	AGRICULTURE—VEGETABLE FOOD.						
	Wheat.	Rye.	Barley.	Barley malt.	Oats.	Apples.	Potatoes.
Albany.....	.....	.....	.....	.....	.....	.....	.....
West Troy.....	122,218	2,113	36,837	6,826	22,759	480	750
Waterford.....	.....	.....	.....	.....	.....	376	2,991
Total.....	122,218	2,113	36,837	6,826	22,759	856	3,741



*Property (in tons of 2,000 pounds) arriving at tide-water from all canals, etc.—(Continued).*

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.			MANUFACTURES.			MERCHANDISE.	
	Flax seed.	Hay.	Pig iron.	Castings and iron ware.	Domestic salt.	Iron and steel.	All other merchandise.	
Albany.....	.....	.....	.....	.....	.....	.....	.....	.....
West Troy.....	55,073	3,027	18,391	265	62,328	459	261	.....
Waterford.....	.....	2,475	.....	.....	.....	.....	4,160	.....
Total.....	55,073	5,502	18,391	265	62,328	459	4,421	.....

*Property (in tons of 2,000 pounds) arriving at tide-water from all canals, etc.—(Concluded).*

OFFICES.	OTHER ARTICLES.							Total tons.
	Ice.	Stone, lime and clay.	Rock and super-phosphate.	Anthracite coal.	Bituminous coal.	Iron ore.	Sundries.	
Albany.....	.....	.....	.....	.....	.....	.....	.....	23,527
West Troy.....	83,440	176,526	532	6,074	308	.....	1,301	649,473
Waterford.....	24,240	33,741	.....	.....	.....	26,207	6,255	182,920
Total.....	107,680	210,267	532	6,074	308	26,207	7,556	855,920

*Value of all property left at tide-water from the canals during the season of 1908.*

OFFICES.	THE FOREST—PRODUCT OF WOOD.			
	Boards and scantling.	Wood.	Wood pulp	Ashes, pot and pearl.
Albany.....	\$423,427	.....	.....	.....
West Troy.....	767,190	\$240	\$16,600	\$213,990
Waterford.....	1,398,918	6,796	.....	.....
Total.....	\$2,589,535	\$7,036	\$16,600	\$213,990

*Value of all property left at tide-water from the canals, etc.—(Continued).*

OFFICES.	AGRICULTURE—VEGETABLE FOOD.						
	Wheat.	Rye.	Barley.	Barley malt.	Oats.	Apples.	Potatoes.
Albany.....	.....	.....	.....	.....	.....	.....	.....
West Troy.....	\$4,481,316	\$63,378	\$951,605	\$321,200	\$739,677	\$16,918	\$17,500
Waterford.....	.....	.....	.....	.....	.....	13,250	69,790
Total.....	\$4,481,316	\$63,378	\$951,605	\$321,200	\$739,677	\$30,168	\$87,290

*Value of all property left at tide-water from the canals, etc.—(Continued).*

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.		MANUFACTURES.			MERCHANDISE.	
	Flax seed.	Hay.	Pig iron.	Castings and iron ware.	Domestic salt.	Iron and steel.	All other merchandise.
Albany.....	.....	.....	.....	.....	.....	.....	.....
West Troy.....	\$2,202,908	\$45,404	\$367,820	\$15,876	\$623,273	\$13,776	\$31,332
Waterford.....	.....	37,127	.....	.....	.....	.....	499,195
Total.....	\$2,202,908	\$82,531	\$367,820	\$15,876	\$623,273	\$13,776	\$530,527

*Value of all property left at tide-water from the canals, etc. — (Concluded).*

OFFICES.	OTHER ARTICLES.						Total value.
	Ice.	Stone, lime and clay.	Rock and super-phosphate.	Anthracite coal.	Bituminous coal.	Iron ore.	Sundries.
Albany.....	.....	.....	.....	.....	.....	.....	.....
West Troy.....	\$208,600	\$441,315	\$5,322	\$30,372	\$771	.....	\$156,156
Waterford.....	60,600	84,352	.....	.....	.....	\$131,038	750,648
Total.....	\$269,200	\$525,667	\$5,322	\$30,372	\$771	\$131,038	\$906,804
							\$423,427
							11,732,539
							3,051,714
							\$15,207,680

*Property (in tons of 2,000 lbs.) that went to New York from the Erie canal during the season of 1908.*

	THE FOREST—PRODUCT OF WOOD.			AGRICULTURE—VEGETABLE FOOD.		
	Boards and scantling.	Timber.	Ashes, pot and pearl.	Wheat.	Rye.	Barley.
Albany.....	8,210	26	.....	.....	.....	.....
West Troy.....	41,361	.....	5,885	122,218	2,113	34,925
Total.....	49,571	26	5,885	122,218	2,113	34,925

*Property (in tons of 2,000 pounds) that went to New York from the Erie canal, etc.—(Continued).*

OFFICES.	AGRICULTURE—VEGETABLE FOOD.				ALL OTHER AGRICULTURAL PRODUCTS.	
	Barley malt.	Oats.	Apples.	Potatoes.	Flaxseed.	Hay.
Albany.....	.....	.....	.....	.....	.....	.....
West Troy.....	6,826	22,759	480	750	55,073	2,903
Total.....	6,826	22,759	480	750	55,073	2,903



*Property (in tons of 2,000 pounds) that went to New York from the Erie canal, etc.—(Continued).*

OFFICES.	MANUFACTURES.			MERCHANDISE.	
	Pig iron.	Castings and iron ware.	Domestic salt.	Iron and steel.	All other merchandise.
Albany.....	.....	.....	.....	.....	.....
West Troy.....	18,391	35	62,030	459	261
Total.....	18,391	35	62,030	459	261

*Property (in tons of 2,000 pounds) that went to New York from the Erie canal, etc.—(Concluded).*

OFFICES.	OTHER ARTICLES.				Total tons.
	Ice.	Stone, lime and clay.	Rock and super-phosphate.	Sundries.	
Albany.....	.....	.....	.....	588	8,824
West Troy.....	83,440	14,154	532	1,301	475,896
Total.....	83,440	14,154	532	1,889	484,720

*Property (in tons of 2,000 lbs.) that went to New York from the Champlain canal during the season of 1908.*

OFFICES.	THE FOREST—PRODUCT OF WOOD.		AGRICULTURE—VEGETABLE FOOD.		All other agricultural products—Hay.
	Boards and scantling.	Wood.	Apples.	Potatoes.	
Waterford.....	77,718	4,757	376	2,991	2,475
Total.....	77,718	4,757	376	2,991	2,475

*Property (in tons of 2,000 pounds) that went to New York from the Champlain canal, etc.—(Concluded).*

OFFICES.	Merchandise —All other merchandise.	OTHER ARTICLES.				Total tons.
		Ice.	Stone, lime and clay.	Iron ore.	Sundries.	
Waterford.....	4,160	24,240	33,741	26,207	6,255	182,920
. Total.....	4,160	24,240	33,741	26,207	6,255	182,920

*Property (in tons of 2,000 lbs.) that went to New York from all canals during the season of 1908.*

OFFICES.	THE FOREST—PRODUCT OF WOOD.			
	Boards and scantling.	Timber.	Wood.	Ashes, pot and pearl.
Albany.....	8,210	26	.....	.....
West Troy.....	41,361	.....	.....	5,885
Waterford.....	77,718	.....	4,757	.....
Total.....	127,289	26	4,757	5,885

*Property (in tons of 2,000 pounds) that went to New York from all canals, etc.—(Continued).*

OFFICES.	AGRICULTURE—VEGETABLE FOOD.						
	Wheat.	Rye.	Barley.	Barley malt.	Oats.	Apples.	Potatoes.
Albany.....	122,218	2,113	34,925	6,826	22,759	480	750
West Troy.....						376	2,991
Waterford.....							
Total.....	122,218	2,113	34,925	6,826	22,759	856	3,741

*Property (in tons of 2,000 pounds) that went to New York from all canals, etc.—(Continued).*

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.		MANUFACTURES.		
	Flax seed.	Hay.	Pig iron.	Castings and iron ware	Domestic salt.
Albany.....	.....	.....	.....	.....	.....
West Troy.....	55,073	2,903	18,391	35	62,030
Waterford.....	2,475	2,475	.....	.....	.....
Total.....	55,073	5,378	18,391	35	62,030

*Property (in tons of 2,000 pounds) that went to New York from all canals, etc.—(Concluded).*

OFFICES.	MERCHANDISE.		OTHER ARTICLES.					Total tons.
	Iron and steel.	All other merchandise.	Ice.	Stone, lime and clay.	Rock and super-phosphate.	Iron ore.	Sundries.	
Albany.....	.....	.....	.....	.....	.....	.....	538	8,824
West Troy.....	459	261	83,440	14,154	532	.....	1,301	475,896
Waterford.....	.....	4,160	24,240	33,741	.....	26,207	6,255	182,920
Total.....	459	4,421	107,680	47,895	532	26,207	8,144	667,640



*Value of all the property that went to New York from the canals during the season of 1908.*

OFFICES.	THE FOREST—PRODUCT OF WOOD.			
	Boards and scantling.	Timber.	Wood.	Ashes, pot and pearl.
Albany.....	\$147,776	\$347	.....	.....
West Troy.....	744,501	.....	.....	\$213,990
Waterford.....	1,398,918	.....	\$6,796	.....
Total.....	\$2,291,195	\$347	\$6,796	\$213,990

*Value of all the property that went to New York from the canals, etc.—(Continued).*

OFFICES.	AGRICULTURE—VEGETABLE FOOD.						
	Wheat.	Rye.	Barley.	Barley malt.	Oats.	Apples.	Potatoes.
Albany.....	.....	.....	.....	.....	.....	.....	.....
West Troy.....	\$4,481,316	\$63,378	\$902,222	\$321,200	\$739,677	\$16,918	\$17,500
Waterford.....	.....	.....	.....	.....	.....	13,250	69,790
Total.....	\$4,481,316	\$63,378	\$902,222	\$321,200	\$739,677	\$30,168	\$87,290

*Value of all the property that went to New York from the canals, etc.—(Continued).*

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.			MANUFACTURES.			MERCHANDISE.	
	Flax seed.	Hay.		Pig iron.	Castings and iron ware.	Domestic salt.	Iron and steel.	All other merchandise.
Albany.....	.....	.....	.....	.....	.....	.....	.....	.....
West Troy.....	\$2,202,908	\$43,544		\$367,820	\$2,100	\$620,298	\$13,776	\$31,332
Waterford.....	.....	37,127		.....	.....	.....	.....	499,195
Total.....	\$2,202,908	\$80,671		\$367,820	\$2,100	\$620,298	\$13,776	\$530,527

*Value of all the property that went to New York from the canals, etc.—(Concluded).*

OFFICES.	OTHER ARTICLES.					Total value.
	Ice.	Stone, lime and clay.	Rock and super- phosphate.	Iron ore.	Sundries.	
Albany.....	.....	.....	.....	.....	\$70,560	\$218,683
West Troy.....	\$208,600	\$35,386	\$5,322	.....	156,156	11,187,944
Waterford.....	60,600	84,352	.....	\$131,038	750,648	3,051,714
Total.....	\$269,200	\$119,738	\$5,322	\$131,038	\$977,364	\$14,458,341

STATEMENT showing the total quantity (in tons of 2,000 pounds) of property cleared at Buffalo during the season of 1908, and the value of the same.

ARTICLES.	Tons.	Value.
Boards and scantling . . . . .	119,274	\$2,146,948
Wheat . . . . .	180,321	6,611,779
Rye . . . . .	2,112	63,378
Corn . . . . .	59,182	1,585,245
Barley . . . . .	45,405	1,172,965
Barley malt . . . . .	8,548	402,320
Oats . . . . .	60,954	1,981,027
Flax seed . . . . .	55,142	2,205,719
Pig iron . . . . .	7,357	148,148
Iron and steel . . . . .	459	18,360
All other merchandise . . . . .	8,246	989,560
Stone, lime and clay . . . . .	369,604	924,010
Total tons and value . . . . .	916,604	\$18,249,459

STATEMENT showing the total quantity (in tons of 2,000 pounds) of property left at Buffalo during the season of 1908, and the value of the same.

ARTICLES.	Tons.	Value.
Boards and scantling . . . . .	119,318	\$2,147,734
Wood pulp . . . . .	854	17,173
Wheat . . . . .	5,703	209,121
Corn . . . . .	52,192	1,398,000
Hemp . . . . .	249	39,883
Clover and grass seed . . . . .	217	25,101
Peas and beans . . . . .	727	54,540
Barley malt . . . . .	4,524	116,870
Lard, tallow and lard oil . . . . .	1,073	171,689
Sugar . . . . .	19,042	1,904,227
Molasses . . . . .	803	48,202
Coffee . . . . .	1,882	376,420
Iron and steel . . . . .	279	11,198
Dried fruit . . . . .	53	10,706
All other merchandise . . . . .	37,186	4,462,370
Stone, lime and clay . . . . .	389,223	973,058
Phosphate . . . . .	6,870	68,704
Oats . . . . .	37,360	1,214,200
Sundries . . . . .	27,296	3,275,670
Domestic spirits . . . . .	69	21,695
Flint, enamel and glassware . . . . .	3	1,200
Total tons and value . . . . .	704,923	\$16,547,761

STATEMENT showing the total quantity (in tons of 2,000 pounds) of property cleared on the Oswego canal during the season of 1908, and the value of the same.

ARTICLES.	Tons.	Value.
Barley malt.....	1,112	\$52,320
Boards and scantling.....	1,345	24,201
Shingles.....	6	175
Wood pulp.....	750	15,000
Wood.....	112	160
Domestic salt.....	482	4,820
Barley.....	1,652	42,673
Pulp wood.....	21,071	115,888
All other merchandise.....	7,122	1,092,240
Stone, lime and clay.....	44,640	111,586
Anthracite coal.....	1,189	5,945
Sundries.....	1,863	223,532
Ice.....	9,220	23,050
Bituminous coal.....	2,017	5,041
Apples.....	213	7,500
Iron and steel.....	35	1,400
Flint, enamel and glassware.....	2	600
Total tons and value.....	92,831	\$1,726,131

STATEMENT showing the total quantity (in tons of 2,000 pounds) of property left on the Oswego canal during the season of 1908, and the value of the same.

ARTICLES.	Tons.	Value.
Barley malt.....	1,795	\$84,480
Boards and scantling.....	1,642	29,545
Shingles.....	6	175
Wood.....	112	160
Wood pulp.....	750	15,000
Barley.....	687	17,749
Domestic salt.....	238	2,380
All other merchandise.....	8,945	1,311,000
Stone, lime and clay.....	39,495	103,725
Anthracite coal.....	1,189	5,945
Sundries.....	2,031	243,692
Pulp wood.....	21,071	115,888
Ice.....	8,845	22,113
Bituminous coal.....	2,014	5,035
Apples.....	213	7,500
Iron and steel.....	35	1,400
Flint, enamel and glassware.....	2	600
Total tons and value.....	89,070	\$1,966,387

STATEMENT showing the total quantity (in tons of 2,000 pounds) of property cleared on the Black River canal during the season of 1908, and the value of the same.

ARTICLES.	Tons.	Value.
Boards and scantling .....	3,003	\$54,039
Wood.....	5,134	7,336
Timber.....	3,218	43,450
Potatoes.....	726	16,940
All other merchandise.....	2,475	296,930
Bituminous coal.....	1,235	3,086
Pulp wood.....	123	677
Corn.....	857	22,950
Oats.....	2	52
Domestic salt.....	14	140
Stone, lime and clay.....	67,366	168,401
Anthracite coal.....	1,659	8,293
Total tons and value.....	85,812	\$622,294

STATEMENT showing the total quantity (in tons of 2,000 pounds) of property left on the Black River canal during the season of 1908, and the value of the same.

ARTICLES.	Tons.	Value.
Boards and scantling .....	3,237	\$58,280
Timber.....	299	4,040
Wood.....	5,177	7,396
Flour.....	5	270
Corn.....	1,151	30,825
Oats.....	2	52
Apples.....	45	1,588
Domestic salt.....	14	140
All other merchandise.....	24,665	333,481
Stone, lime and clay.....	65,988	164,970
Furniture.....	.....	.....
Anthracite coal.....	1,713	8,564
Bituminous coal.....	1,284	3,210
Potatoes.....	726	16,940
Total tons and value.....	104,306	\$629,756

STATEMENT showing the total quantity (in tons of 2,000 pounds)  
of property cleared on the Cayuga and Seneca canal during the  
season of 1908, and the value of the same.

ARTICLES.	Tons.	Value.
Oats.....	55	\$1,789
Wheat.....	1,659	60,823
Boards and scantling.....	117	2,100
Barley malt.....	2,379	111,977
Domestic salt.....	23,676	236,760
All other merchandise.....	3,502	420,120
Anthracite coal.....	10,500	52,501
Bituminous coal.....	22,676	56,689
Stone, lime and clay.....	11,053	27,633
Corn.....	5,282	141,490
Iron and steel.....	30	1,200
Hay.....	100	1,500
Total tons and value.....	81,029	\$1,114,582

STATEMENT showing the total quantity (in tons of 2,000 pounds)  
of property left on the Cayuga and Seneca canal during the  
season of 1908, and the value of the same.

ARTICLES.	Tons.	Value.
Boards and scantling.....	100	\$1,800
Wheat.....	1,479	54,223
Furniture.....	.....	.....
Corn.....	5,522	147,915
Oats.....	55	1,789
Barley malt.....	2,379	111,977
All other merchandise.....	3,697	443,520
Stone, lime and clay.....	12,287	31,968
Anthracite coal.....	10,641	53,203
Bituminous coal.....	22,434	56,083
Domestic salt.....	22,789	227,892
Iron and steel.....	15	600
Wood.....	.....	.....
Hay.....	100	1,500
Total tons and value.....	81,498	\$1,132,470



STATEMENT showing the total quantity (in tons of 2,000 pounds) of property cleared at Whitehall during the season of 1908, and the value of the same.

ARTICLES.	Tons.	Value.
Boards and scantling.....	91,412	\$1,645,398
Timber.....	2,586	34,911
Wood.....	2,797	3,996
Pulp wood.....	147,984	813,912
Apples.....	107	3,750
Potatoes.....	726	16,940
Hay.....	2,233	33,498
All other merchandise.....	1,179	141,482
Stone, lime and clay.....	29,032	72,579
Iron ore.....	27,418	137,088
Sundries.....	1,023	122,732
Total tons and value.....	306,497	\$3,026,286

STATEMENT showing the total quantity (in tons of 2,000 pounds) of property left at Whitehall during the season of 1908, and the value of the same.

ARTICLES.	Tons.	Value.
Boards and scantling.....	28,750	\$517,486
Wood.....	2,618	3,740
Pulp wood.....	147,984	813,912
Foreign salt.....	180	3,600
Domestic salt.....	326	3,263
Wood pulp.....	666	13,312
All other merchandise.....	7,866	943,911
Stone, lime and clay.....	45,073	112,681
Anthracite coal.....	87,886	439,432
Bituminous coal.....	13,391	33,478
Sundries.....	388	46,560
Bloom iron.....	848	25,440
Timber.....	2,586	34,911
Total tons and value.....	338,562	\$2,991,726

**ANNUAL STATEMENT showing the total quantity of shipments of each article first cleared on the canal at and the total quantity of shipments of each article left from the canal at Whitehall from the 15th of May to the 15th of November, 1908, going to and coming from New York, Vermont and Canada.**

ARTICLES.	QUANTITY CLEARED.			
	Coming from Canada.	Coming from New York.	Coming from Vermont.	Total cleared.
<b>THE FOREST.</b>				
<i>Product of wood:</i>				
Boards and scantling (feet) . . . . .	34, 715, 675	18, 157, 460	1, 973, 456	54, 846, 591
Shingles (M) . . . . .	.....	.....	.....	.....
Timber (cubic feet) . . . . .	.....	124, 300	5, 000	129, 300
Staves (pounds) . . . . .	.....	.....	.....	.....
Wood (cords) . . . . .	.....	999	.....	999
Ashes, pot and pearl (barrels) . . . . .	.....	.....	.....	.....
Ashes, leached (bushels) . . . . .	.....	.....	.....	.....
Pulp wood (pounds) . . . . .	271, 440, 000	24, 528, 000	.....	295, 968, 000
Wood pulp (pounds) . . . . .	.....	.....	.....	.....
<b>AGRICULTURE.</b>				
<i>Product of animals:</i>				
Pork (barrels) . . . . .	.....	.....	.....	.....
<i>Vegetable food:</i>				
Hay (pounds) . . . . .	4, 466, 357	.....	.....	4, 466, 357
Wheat (bushels) . . . . .	.....	.....	.....	.....
Rye (bushels) . . . . .	.....	.....	.....	.....
Corn (bushels) . . . . .	.....	.....	.....	.....
Barley (bushels) . . . . .	.....	.....	.....	.....
Oats (bushels) . . . . .	.....	.....	.....	.....

*Statement showing the total quantity of shipments of each article first cleared on canal, etc.— (Continued).*

ARTICLES.	QUANTITY CLEARED.			Total cleared.
	Coming from Canada.	Coming from New York.	Coming from Vermont.	
Peas and beans (bushels) . . . . .	.....	.....	.....	.....
Apples (barrels) . . . . .	.....	.....	1,500	1,500
Potatoes (bushels) . . . . .	.....	24,200	.....	24,200
MANUFACTURES.				
Leather (pounds) . . . . .	.....	.....	.....	.....
Furniture (pounds) . . . . .	.....	.....	.....	.....
Pig iron (pounds) . . . . .	.....	.....	.....	.....
Bloom and bar iron (pounds) . . . . .	.....	.....	.....	.....
Castings and iron ware (pounds) . . . . .	.....	.....	.....	.....
Domestic salt (pounds) . . . . .	.....	.....	.....	.....
Foreign salt (pounds) . . . . .	.....	.....	.....	.....
MERCHANDISE.				
Sugar (pounds) . . . . .	.....	.....	.....	.....
Molasses (pounds) . . . . .	.....	.....	.....	.....
Nails, spikes and horse shoes (pounds) . . . . .	.....	.....	.....	.....
Iron and steel (pounds) . . . . .	.....	.....	.....	.....
Railroad iron (pounds) . . . . .	.....	.....	.....	.....
Crockery and glassware (pounds) . . . . .	.....	.....	.....	.....
All other merchandise (pounds) . . . . .	950,120	1,407,920	.....	2,358,040
<i>Other articles:</i>				
Stone, lime and clay (pounds) . . . . .	.....	58,063,520	.....	58,063,520
Gypsum (pounds) . . . . .	.....	.....	.....	.....

Anthracite coal (pounds).....	.....	.....	.....	.....
Bituminous coal (pounds).....	.....	.....	.....	.....
Iron ore (pounds).....	.....	54,835,200	.....	54,835,200
Ptroleum or earth oil, crude and refined (barrels).....	.....	.....	.....	.....
Sundries (pounds).....	355,910	776,000	913,620	2,045,530

Statement showing the total quantity of shipments of each article first cleared on canal, etc.

ARTICLES.	QUANTITY LEFT.			
	Going to Canada.	Going to New York.	Going to Vermont.	Total left.
<b>THE FOREST.</b>				
<i>Product of wood:</i>				
Boards and scantling (feet) . . . . .		16,949,521	300,000	17,249,521
Shingles (M) . . . . .				
Timber (cubic feet) . . . . .		129,300		129,300
Staves (pounds) . . . . .				
Wood (cords) . . . . .		935		935
Ashes, pot and pearl (barrels) . . . . .				
Ashes, leached (bushels) . . . . .				
Pulp wood (pounds) . . . . .		295,968,000		295,968,000
Wood pulp (pounds) . . . . .		1,331,200		1,331,200
<b>AGRICULTURE.</b>				
<i>Product of animals:</i>				
Pork (barrels) . . . . .				
<i>Vegetable food:</i>				
Hay (pounds) . . . . .				
Wheat (bushels) . . . . .				
Rye (bushels) . . . . .				
Corn (bushels) . . . . .				
Barley (bushels) . . . . .				
Oats (bushels) . . . . .				
Peas and beans (bushels) . . . . .				

Apples (barrels).....	.....	.....	.....	.....
Potatoes (bushels).....	.....	.....	.....	.....
<b>MANUFACTURES.</b>				
Leather (pounds).....	.....	.....	.....	.....
Furniture (pounds).....	.....	.....	.....	.....
Pig iron (pounds).....	1,696,000	.....	.....	1,696,000
Bloom and bar iron (pounds).....	.....	.....	.....	.....
Castings and iron ware (pounds).....	.....	.....	.....	.....
Domestic salt (pounds).....	.....	652,600	.....	652,600
Foreign salt (pounds).....	.....	360,000	.....	360,000
<b>MERCHANDISE.</b>				
Sugar (pounds).....	.....	.....	.....	.....
Molasses (pounds).....	.....	.....	.....	.....
Nails, spikes and horse shoes (pounds).....	.....	.....	.....	.....
Iron and steel (pounds).....	.....	.....	.....	.....
Railroad iron (pounds).....	.....	.....	.....	.....
Crockery and glassware (pounds).....	.....	.....	.....	.....
All other merchandise (pounds).....	12,137,050	686,000	2,908,800	15,731,850
<i>Other articles:</i>				
Stone, lime and clay (pounds).....	27,118,500	60,840,300	2,186,120	90,144,920
Gypsum (pounds).....	.....	.....	.....	.....
Anthracite coal (pounds).....	118,624,160	15,634,560	41,513,980	175,772,700
Bituminous coal (pounds).....	4,909,800	4,999,940	16,872,960	26,782,700
Iron ore (pounds).....	.....	.....	.....	.....
Petroleum or earth oil, crude and refined (barrels).....	.....	.....	.....	.....
Sundries (pounds).....	.....	776,000	.....	776,000

*The following statement shows the average lake and canal rates on wheat and corn since 1890.*

YEAR.	Freight, Buffalo to New York.	Tolls.	Lake freight.
1890.	c. m. fr.	c. m. fr.	c. m. fr.
Wheat, per bushel.....	3 8 7	Free.	1 9 8
Corn, per bushel.....	3 3 9	Free.	1 6 9
1891.			
Wheat, per bushel.....	3 5 3	Free.	.....
Corn, per bushel.....	3 2 0	Free.	.....
1892.			
Wheat, per bushel.....	3 4 4	Free.	2 2 1
Corn, per bushel.....	3 5 5	Free.	1 9 5
1893.			
Wheat, per bushel.....	4 6 5	.....	1 6 6
Corn, per bushel.....	4 2 8	.....	1 4 5
1894.			
Wheat, per bushel.....	3 1 3	.....	1 2 4
Corn, per bushel.....	2 8 8	.....	1 1 5
1895.			
Wheat, per bushel.....	2 2 0	.....	1 8 0
Corn, per bushel.....	1 9 0	.....	1 7 0
1896.			
Wheat, per bushel.....	3 7 0	.....	1 6 0
Corn, per bushel.....	3 5 0	.....	1 3 0
1897.			
Wheat, per bushel.....	1 8 4	.....	1 2 5
Corn, per bushel.....	2 3 8	.....	1 4 2
1898.			
Wheat, per bushel.....	2 8 7	.....	1 6 9
Corn, per bushel.....	2 3 6	.....	1 5 6
1899.			
Wheat, per bushel.....	2 9 2	.....	2 5 0
Corn, per bushel.....	2 5 0	.....	2 4 0
1900.			
Wheat, per bushel.....	2 5 1	.....	1 8 2
Corn, per bushel.....	2 2 2	.....	1 6 5

*Average lake and canal rates on wheat and corn, etc.—(Conclu'd).*

YEAR.	Freight, Buffalo to New York.			Tolls.	Lake freight.		
	c.	m.	fr.	c.	m.	fr.	
1901.							
Wheat, per bushel.....	3	4	6	.....	1	7	6
Corn, per bushel.....	3	1	1	.....	1	6	4
1902.							
Wheat, per bushel.....	3	7	3	.....	1	5	0
Corn, per bushel.....	3	4	6	.....	1	3	6
1903.							
Wheat, per bushel.....	4	0	3	.....	1	4	0
Corn, per bushel.....	3	6	5	.....	1	3	1
1904.							
Wheat, per bushel.....	3	1	4	.....	1	5	0
Corn, per bushel.....	2	6	7	.....	1	3	4
1905.							
Wheat, per bushel.....	3	8	7	.....	1	6	4
Corn, per bushel.....	3	3	4	.....	1	5	0
1906.							
Wheat, per bushel.....	4	2	4	.....	1	6	7
Corn, per bushel.....	3	8	6	.....	1	5	4
1907.							
Wheat, per bushel.....	5	0	7	.....	1	5	4
Corn, per bushel.....	4	6	6	.....	1	4	1
1908.							
Wheat, per bushel.....	5	0	0	.....	1	1	0
Corn, per bushel.....	4	6	0	.....	1	0	0



*Average rate on wheat and corn by lake, from Chicago to Buffalo, during the season of 1908.*

	Wheat.	Corn.
May, per bushel.....	1.3	1.2
June, per bushel.....	1.0	0.8
July, per bushel.....	1.0	1.0
August, per bushel.....	0.8	0.8
September, per bushel.....	1.0	1.0
October, per bushel.....	1.0	1.0
November, per bushel.....	1.5	1.3
<hr/>		
	c. m. fr.	c. m. fr.
Average .....	1 1 0	1 0 0
<hr/>		

*Average rate on wheat and corn by canal, from Buffalo to New York, during the season of 1908.*

	Wheat.	Corn
May, per bushel.....	5.0	4.6
June, per bushel .....	5.0	4.6
July, per bushel.....	5.0	4.6
August, per bushel.....	5.0	4.6
September, per bushel .....	5.0	4.6
October, per bushel .....	5.0	4.6
November, per bushel.....	5.0	4.6
<hr/>		
	c. m. fr.	c. m. fr.
Average .....	5 0 0	4 6 0
<hr/>		

*The following statement shows the number of clearances issued at each office during the season of 1908.*

Albany . . . . .	171
West Troy . . . . .	6,069
Rome . . . . .	3,524
Syracuse . . . . .	3,915
Rochester . . . . .	1,747
Tonawanda . . . . .	985
Buffalo . . . . .	2,241
Waterford . . . . .	2,609
Whitehall . . . . .	2,051
Oswego . . . . .	527
Waterloo . . . . .	442
Boonville . . . . .	583
<hr/>	
Total . . . . .	24,864
<hr/>	

*Receipts by all routes at New York, May 1 to November 30, 1908.*

	Hudson.	Erie.	Pennsylvania.	D. L. & W.	West Shore.
Flour, barrels.....	184,326	601,794	858,572	231,359	740,752
Meal, barrels.....	.....	5,426	13,885	855	.....
Meal, sacks.....	101,692	14,248	81,084	1,840	13,823
Wheat, bushels.....	162,000	1,927,000	1,776,000	3,371,000	6,233,000
Corn, bushels.....	434,300	906,225	91,375	18,275	967,500
Oats, bushels.....	5,758,500	5,176,500	559,500	121,500	226,500
Barley, bushels.....	121,200	423,600	31,200	22,800	502,800
Rye, bushels.....	2,925	26,325	36,075	49,725	110,175
Malt, bushels.....	625,500	51,000	76,500	294,000	568,500
Peas, bushels.....	52,769	1,120	2,691	13,051	1,693
Total grain.....	7,157,194	8,511,773	2,573,341	3,890,351	8,610,168
Flour, bushels.....	829,467	2,708,070	3,863,574	1,041,115	3,333,384
Meal, bushels.....	203,384	50,200	217,708	7,100	27,646
Grand total.....	8,190,045	11,270,043	6,654,623	4,938,566	11,971,198
Per cent.....	12.57	17.33	10.21	7.58	18.37

*Receipts by all routes at New York, etc.—(Continued).*

	L. V. R. R.	B. & O. R. R.	Various.	Total rail.
Flour, barrels.....	1,586,295	190,271	21,240	4,414,609
Meal, barrels.....	600	15,972	225	36,963
Meal, sacks.....	159,125	123,575	734	496,121
Wheat, bushels.....	4,392,000	9,000	7,000	17,877,000
Corn, bushels.....	267,675	8,600	18,275	2,712,225
Oats, bushels.....	999,000	39,000	265,500	13,146,000
Barley, bushels.....	92,400	.....	.....	1,194,000
Rye, bushels.....	27,300	.....	.....	252,525
Malt, bushels.....	117,000	24,000	57,000	1,813,500
Peas, bushels.....	25,992	.....	1,000	98,316
Total grain.....	5,921,367	80,600	348,775	37,093,566
Flour, bushels.....	7,138,328	856,220	95,580	19,865,741
Meal, bushels.....	320,650	311,038	2,368	1,140,094
Grand total.....	13,380,345	1,247,858	446,723	58,099,401
Per cent.....	20.53	1.91	.68	89.18

*Receipts by all routes at New York, etc.—(Concluded).*

	River and coast.	Canal.	Total water.	Total rail and water.
Flour, barrels.....	15,098	.....	15,098	4,429,707
Meal, barrels.....	.....	.....	.....	36,963
Meal, sacks.....	.....	.....	.....	496,121
Wheat, bushels.....	.....	3,749,200	3,749,200	21,626,200
Corn, bushels.....	120,000	17,800	137,800	2,850,025
Oats, bushels.....	.....	1,305,500	1,305,500	14,451,500
Barley, bushels.....	.....	1,242,300	1,242,300	2,436,300
Rye, bushels.....	.....	75,400	75,400	327,925
Malt, bushels.....	.....	401,300	401,300	2,214,800
Peas, bushels.....	73,742	.....	73,742	172,058
Total grain.....	193,742	6,791,500	6,985,242	44,078,808
Flour, bushels.....	67,941	.....	67,941	19,933,682
Meal, bushels.....	.....	.....	.....	1,140,094
Grand total.....	261,683	6,791,500	7,053,183	65,152,584
Per cent.....	.40	10.42	10.82	100.00

*Receipts by all routes at New York, January 1 to December 31, 1908.*

	Hudson.	Erte.	Pennsylvania.	D. L. & W.	West Shore.
Flour, barrels.....	332,425	967,209	1,380,121	391,854	1,219,669
Meal, barrels.....	100	7,485	23,081	7,535	.....
Meal, sacks.....	163,264	23,762	140,221	7,952	26,873
Wheat, bushels.....	214,000	2,288,000	2,207,000	4,621,000	8,457,000
Corn, bushels.....	677,250	3,045,475	700,900	154,800	2,921,850
Oats, bushels.....	9,288,000	9,141,000	775,500	327,000	628,500
Barley, bushels.....	270,000	537,600	79,200	127,200	1,033,200
Rye, bushels.....	5,850	88,725	196,950	86,775	364,650
Malt, bushels.....	915,000	150,000	123,000	342,000	1,177,500
Peas, bushels.....	103,907	5,046	7,843	27,074	7,568
Total grain.....	11,474,007	15,255,846	4,090,393	5,685,849	14,590,268
Flour, bushels.....	1,495,912	4,352,441	6,210,544	1,763,343	5,488,511
Meal, bushels.....	326,928	77,464	372,766	34,044	53,746
Grand total.....	13,296,847	19,685,751	10,673,703	7,483,236	20,132,525
Per cent.....	12.83	18.98	10.29	7.21	19.40

*Receipts by all routes at New York, etc.—(Continued).*

	L. V. R. R.	B. & O. R. R.	Various.	Total rail.
Flour, barrels.....	2,753,136	281,958	43,424	7,369,796
Meal, barrels.....	1,200	23,054	225	59,680
Meal, sacks.....	281,655	213,142	3,534	860,403
Wheat, bushels.....	5,895,000	9,000	11,000	23,702,000
Corn, bushels.....	352,600	19,350	30,100	7,902,325
Oats, bushels.....	1,794,000	94,500	459,000	22,507,500
Barley, bushels.....	180,000	.....	1,200	2,228,400
Rye, bushels.....	50,700	.....	7,800	801,450
Malt, bushels.....	237,000	36,000	88,500	3,069,000
Peas, bushels.....	45,215	.....	1,800	198,453
Total grain.....	8,554,515	158,850	599,400	60,409,128
Flour, bushels.....	12,389,112	1,268,811	195,408	33,164,082
Meal, bushels.....	568,110	518,500	7,968	1,959,526
Grand total.....	21,511,737	1,946,161	802,776	95,532,736
Per cent.....	20.75	1.88	.77	92.11

*Receipts by all routes at New York, etc.—(Concluded).*

	River and coast.	Canal.	Total water.	Total rail and water.
Flour, barrels.....	24,047	.....	24,047	7,393,843
Meal, barrels.....	4	.....	4	59,684
Meal, sacks.....	.....	.....	.....	860,403
Wheat, bushels.....	.....	4,095,800	4,095,800	27,797,800
Corn, bushels.....	137,180	17,800	154,980	8,057,305
Oats, bushels.....	.....	1,346,100	1,346,100	23,853,600
Barley, bushels.....	632,765	1,291,600	1,924,365	4,152,765
Rye, bushels.....	.....	75,400	75,400	876,855
Malt, bushels.....	.....	401,300	401,300	3,470,300
Peas, bushels.....	79,087	.....	79,087	277,540
Total grain.....	849,032	7,228,000	8,077,032	68,486,160
Flour, bushels.....	108,211	.....	108,211	33,272,293
Meal, bushels.....	16	.....	16	1,959,542
Grand total.....	957,259	7,228,000	8,185,259	103,717,995
Per cent.....	.92	6.97	7.89	100.00



*The following table shows the separate tonnage of the New York Central, the Erie railway and the canals each year since 1853.*

YEAR.	New York Central.	Erie.	Canals.	Total.
1853.....	360,000	631,039	4,247,853	5,238,892
1854.....	549,804	743,250	4,165,862	5,458,916
1855.....	670,073	842,048	4,022,617	5,534,738
1856.....	776,112	943,215	4,116,084	5,835,409
1857.....	838,791	978,066	3,344,061	5,160,918
1858.....	765,407	816,954	3,665,192	5,247,553
1859.....	834,319	869,073	3,781,684	5,485,076
1860.....	1,028,183	1,139,554	4,650,214	6,817,951
1861.....	1,167,302	1,253,418	4,507,635	6,928,355
1862.....	1,387,433	1,632,955	5,598,785	8,619,173
1863.....	1,449,604	1,815,096	5,557,692	8,822,392
1864.....	1,557,148	2,170,798	4,852,941	8,580,887
1865.....	1,275,299	2,234,350	4,729,654	8,239,303
1866.....	1,602,197	3,242,792	5,775,220	10,620,209
1867.....	1,667,926	3,484,546	5,688,325	10,840,797
1868.....	1,846,599	3,908,243	6,442,225	12,197,067
1869.....	2,281,885	4,312,209	5,859,080	12,453,174
1870.....	4,122,000	4,852,505	6,173,769	15,148,274
1871.....	4,532,956	4,844,208	6,467,888	15,844,152
1872.....	4,393,965	5,564,274	6,673,370	16,631,609
1873.....	5,522,724	6,312,702	6,364,782	18,200,208
1874.....	6,114,678	6,364,276	5,804,588	18,283,542

1875.....	6,001,954	6,239,946	4,859,858	17,101,758
1876.....	6,803,680	5,972,818	4,172,129	16,948,627
1877.....	6,351,356	6,182,451	4,955,963	17,489,770
1878.....	7,695,413	6,150,568	5,171,320	19,017,301
1879.....	9,015,753	8,212,641	5,362,372	22,590,766
1880.....	10,533,038	8,715,892	6,457,556	25,706,486
1881.....	11,591,379	11,086,823	5,179,192	27,857,394
1882.....	11,330,393	11,895,238	5,467,423	28,693,054
1883.....	10,892,440	13,610,623	5,684,956	30,168,019
1884.....	10,212,418	11,071,938	5,009,488	26,293,844
1885.....	10,733,499	10,253,489	4,731,784	25,718,772
1886.....	12,636,485	18,668,238	5,293,982	36,598,705
1887.....	14,531,726	13,949,260	5,553,805	34,034,791
1888.....	15,162,812	15,174,009	4,942,948	35,279,769
1889.....	15,011,541	14,084,132	5,370,369	34,466,042
1890.....	16,108,441	16,269,656	5,246,102	37,624,199
1891.....	16,621,576	17,339,140	4,563,472	38,524,188
1892.....	20,721,752	18,334,716	4,281,995	43,338,463
1893.....	21,312,072	17,309,198	4,031,963	42,953,233
1894.....	18,728,592	15,305,260	3,882,560	37,916,412
1895.....	19,741,495	12,928,530	3,500,314	36,170,339
1896.....	22,123,617	22,562,243	3,714,894	48,400,754
1897.....	20,649,810	19,443,898	3,617,804	43,711,512
1898.....	23,403,439	22,547,529	3,360,063	49,311,031
1899.....	25,356,474	22,660,236	3,686,051	51,702,761
1900.....	37,586,496	26,501,104	3,345,941	65,433,541
1901.....	37,403,122	24,817,112	3,420,613	65,640,847
1902.....	42,552,586	26,248,575	3,274,610	72,075,771
1903.....	38,081,380	30,586,743	3,616,385	72,283,508
1904.....	36,379,655	28,992,293	3,138,547	68,510,495

*Separate tonnage of the New York Central, the Erie railway and the canals, etc.—(Concluded).*

YEAR.	New York Central.	Erie.	Canals.	Total.
1905.....	39,734,512	30,791,733	3,226,896	73,753,141
1906.....	43,268,731	35,434,584	3,540,907	82,244,222
1907.....	45,967,208	38,201,663	3,407,914	87,576,785
1908.....	41,980,236	32,860,498	3,051,877	77,892,611

*The following table shows the losses or gains in the tonnage of the New York Central, the Erie railway and the canals each year since 1853, comparison being made with previous year.*

YEAR.	N. Y. CENTRAL.		ERIE.		CANALS.	
	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.
1854.....	189,804	.....	112,211	.....	.....	81,991
1855.....	120,269	.....	19,798	.....	.....	143,245
1856.....	106,039	.....	101,167	.....	93,456	.....
1857.....	62,679	.....	34,851	.....	.....	772,021
1858.....	.....	73,284	.....	161,112	321,131	.....
1859.....	68,912	.....	53,119	.....	116,492	.....
1860.....	193,864	.....	270,481	.....	868,530	.....
1861.....	139,119	.....	113,864	.....	.....	142,579
1862.....	220,131	.....	379,537	.....	1,091,150	.....
1863.....	62,171	.....	182,141	.....	.....	41,093
1864.....	107,544	.....	355,702	.....	.....	704,751
1865.....	.....	281,849	63,552	.....	1,045,566	123,287
1866.....	326,898	.....	1,008,442	.....	.....	.....
1867.....	65,729	.....	241,754	.....	.....	86,895
1868.....	178,673	.....	423,697	.....	753,900	.....
1869.....	435,286	.....	403,966	.....	.....	583,145
1870.....	1,840,115	.....	540,296	.....	.....	.....
1871.....	410,056	.....	.....	8,297	314,689	.....
1872.....	.....	138,091	720,066	.....	294,119	.....
1873.....	1,128,759	.....	748,430	.....	205,482	308,588

Table showing the losses or gains in the tonnage of the New York Central, the Erie railway and the canals,  
etc.—(Concluded).

YEAR.	N. Y. CENTRAL.		ERIE.		CANALS.	
	Gain.	Loss.	Gain.	Loss.	Gain.	Loss.
1874.....	591,954	.....	51,574	.....	.....	560,194
1875.....	.....	112,724	.....	124,330	.....	944,730
1876.....	801,726	.....	.....	267,128	.....	687,729
1877.....	.....	452,324	209,633	.....	783,834	.....
1878.....	1,344,057	.....	.....	31,833	215,357	.....
1879.....	1,320,340	.....	2,062,073	.....	191,052	.....
1880.....	1,517,285	.....	503,251	.....	1,095,284	.....
1881.....	1,058,341	.....	2,370,931	.....	.....	1,278,464
1882.....	.....	260,986	808,415	.....	228,231	.....
1883.....	.....	437,953	1,715,385	.....	196,633	.....
1884.....	.....	860,022	2,608,975	.....	.....	654,568
1885.....	521,081	.....	.....	818,449	.....	277,704
1886.....	1,902,936	.....	8,414,750	.....	562,198	.....
1887.....	1,895,291	.....	.....	4,718,978	259,823	.....
1888.....	631,086	.....	1,224,749	.....	.....	610,857
1889.....	.....	151,271	.....	89,877	427,421	.....
1890.....	1,096,900	.....	1,185,524	.....	.....	124,267
1891.....	513,126	.....	1,069,884	.....	.....	682,530
1892.....	4,100,176	.....	995,576	.....	.....	281,477
1893.....	590,220	.....	.....	1,025,518	49,968	.....

1894	2,583,480	.....	2,003,938	.....	449,403
1895	.....	.....	2,376,730	.....	382,246
1896	1,012,903	9,633,712	.....	214,580	.....
1897	2,382,122	3,103,631	3,118,345	.....	97,090
1898	2,753,629	112,707	.....	.....	257,741
1899	1,953,035	1,840,868	.....	325,988	.....
1900	12,230,022	316,008	.....	.....	340,110
1901	.....	183,374	.....	74,672	.....
1902	5,149,464	1,431,463	.....	.....	146,003
1903	.....	4,338,168	.....	340,775	.....
1904	.....	1,701,725	1,594,450	.....	476,838
1905	3,354,857	1,799,440	.....	83,349	.....
1906	3,534,219	4,642,851	.....	314,011	.....
1907	2,698,477	2,767,079	.....	.....	132,993
1908	.....	.....	5,341,165	.....	356,037
	3,986,972	.....	.....	.....	.....

*The total tons coming to tide-water for each of the seventy-one years, and the aggregate value thereof, in market was as follows:*

YEAR.	Tons.	Value.
1838.....	640,481	\$23,038,510
1839.....	602,128	20,163,190
1840.....	699,012	23,213,573
1841.....	774,334	27,225,322
1842.....	666,626	22,751,013
1843.....	836,861	28,453,408
1844.....	1,019,094	34,183,167
1845.....	1,204,943	45,452,321
1846.....	1,362,319	51,105,256
1847.....	1,744,283	73,092,414
1848.....	1,447,905	50,883,907
1849.....	1,579,946	52,375,521
1850.....	2,033,863	55,474,637
1851.....	1,977,151	53,927,508
1852.....	2,234,822	66,833,102
1853.....	2,505,797	73,688,044
1854.....	2,223,743	72,120,681
1855.....	1,890,593	74,177,937
1856.....	2,123,469	74,286,735
1857.....	1,617,187	51,190,018
1858.....	1,985,142	61,536,061
1859.....	2,121,672	43,175,312
1860.....	2,854,877	78,798,617
1861.....	2,980,144	81,432,759
1862.....	3,402,709	111,176,568
1863.....	3,274,727	123,173,294
1864.....	2,805,257	145,609,202
1865.....	2,730,181	113,865,846
1866.....	3,305,607	131,801,477
1867.....	3,029,695	120,902,834
1868.....	3,240,806	136,446,582
1869.....	3,096,142	144,866,060
1870.....	3,156,302	105,517,020
1871.....	3,494,801	106,874,570
1872.....	3,647,944	107,086,362
1873.....	3,376,649	97,869,497
1874.....	3,123,112	107,976,476
1875.....	2,608,777	89,447,518
1876.....	2,426,182	73,893,878
1877.....	2,986,812	76,787,713
1878.....	3,637,101	78,563,710
1879.....	3,286,176	96,992,498
1880.....	4,067,402	143,572,991

*Total tons coming to tide-water, etc.—(Concluded).*

YEAR.	Tons.	Value.
1881. ....	3,065,839	\$68,785,451
1882. ....	3,068,152	74,303,139
1883. ....	2,892,176	66,219,034
1884. ....	2,900,788	66,718,124
1885. ....	2,715,219	55,130,473
1886. ....	3,215,177	67,517,864
1887. ....	3,158,923	71,755,221
1888. ....	2,584,661	58,801,038
1889. ....	2,623,836	62,780,410
1890. ....	3,024,765	62,920,266
1891. ....	2,286,855	57,340,280
1892. ....	2,336,519	73,698,295
1893. ....	2,565,845	77,217,815
1894. ....	2,256,895	51,740,449
1895. ....	1,603,745	34,122,010
1896. ....	2,073,378	41,985,498
1897. ....	1,878,218	30,493,208
1898. ....	1,609,472	27,272,655
1899. ....	1,665,217	28,019,204
1900. ....	1,340,631	21,249,492
1901. ....	1,306,714	23,807,093
1902. ....	1,240,124	21,553,144
1903. ....	1,158,539	19,282,983
1904. ....	938,691	16,397,293
1905. ....	1,070,343	18,243,618
1906. ....	1,071,072	19,429,730
1907. ....	869,621	18,667,341
1908. ....	855,920	15,207,680



*The tons of the total movement of articles on all the canals, from 1837 to 1908, both years inclusive, were as follows.*

YEAR.	Product of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total.
1837.....	618,741	208,043	81,735	94,777	168,000	1,171,296
1838.....	665,089	255,227	101,526	124,290	186,879	1,333,011
1839.....	667,551	266,052	111,968	132,286	257,826	1,435,713
1840 Genesee Valley canal opened.....						
1841.....	587,647	393,780	100,367	112,021	222,231	1,416,046
1842.....	645,548	391,905	127,896	141,054	215,258	1,521,661
1843.....	504,597	401,276	98,968	101,446	130,644	1,236,931
1844.....	687,184	455,797	124,277	119,209	126,972	1,513,439
1845.....	864,373	509,387	144,245	141,930	156,651	1,816,586
1846.....	881,774	555,160	160,638	151,450	228,543	1,977,565
1847.....	916,976	814,258	149,006	169,799	218,623	2,268,662
1848.....	1,086,056	1,092,946	176,448	224,890	287,812	2,869,810
1849.....	1,086,080	913,824	202,781	261,458	331,287	2,796,230
1850.....	1,104,940	1,020,259	203,990	255,455	310,088	2,894,732
1851.....	1,261,991	965,619	200,218	269,370	379,419	3,076,617
1852.....	1,393,698	1,125,264	222,529	365,404	475,838	3,582,733
1853.....	1,586,080	1,213,357	207,955	420,295	435,754	3,863,441
1854.....	1,821,525	1,150,924	230,036	458,327	587,041	4,247,853
1855.....	1,768,745	992,839	258,021	406,022	740,235	4,165,862
1856.....	1,534,493	1,047,344	281,873	374,402	784,064	4,022,617
1857.....	1,478,664	1,192,673	284,901	370,768	789,076	4,116,082
1858.....	1,364,002	767,370	232,803	222,954	756,932	3,344,061

1858	1,232,968	1,279,891	295,903	188,441	667,989	3,665,192
1859	1,542,035	816,784	299,421	211,182	912,262	3,781,684
1860	1,509,977	1,682,754	268,759	250,360	938,364	4,650,214
1861	1,052,392	2,144,373	280,256	135,096	895,518	4,507,635
1862	1,569,674	2,494,036	364,877	167,927	1,002,271	5,598,785
1863	1,628,688	2,236,075	319,432	172,278	1,201,219	5,557,692
1864	1,478,921	1,572,836	282,354	143,984	1,374,846	4,852,941
1865	1,467,315	1,696,091	281,832	154,968	1,129,448	4,729,654
1866	1,769,994	1,786,060	302,241	179,878	1,737,047	5,775,220
1867	1,744,252	1,438,517	320,844	319,880	1,964,832	5,688,325
1868	1,958,309	1,442,147	373,262	324,064	2,344,443	6,442,225
1869	1,855,930	1,314,071	342,239	268,970	2,077,870	5,859,080
1870	1,916,511	1,309,153	352,497	271,856	2,323,752	6,173,769
1871	1,941,297	1,863,868	336,288	288,428	2,038,007	6,467,888
1872	1,950,798	1,683,962	325,564	298,758	2,414,288	6,673,370
1873	1,582,072	1,750,418	267,820	172,990	2,591,482	6,364,782
1874	1,482,753	1,772,583	246,697	132,181	2,170,374	5,804,588
1875	1,250,546	1,311,613	275,731	110,141	1,911,827	4,859,858
1876	1,175,313	1,067,497	180,201	64,943	1,684,175	4,172,129
1877	1,312,526	1,522,317	184,218	83,010	1,853,892	4,955,963
1878	1,364,120	1,921,236	220,063	138,064	1,527,837	5,171,320
1879	1,368,849	1,850,347	255,303	237,071	1,650,802	5,362,372
1880	1,566,764	2,408,358	278,114	355,165	1,849,255	6,457,656
1881	1,652,543	1,171,400	250,961	325,775	1,778,513	5,179,192
1882	1,771,743	1,173,257	187,535	283,174	2,051,714	5,467,423
1883	1,828,643	1,394,581	242,649	310,844	1,887,339	5,664,056
1884	1,671,706	1,264,237	205,013	300,480	1,568,052	5,009,488
1885	1,595,632	1,108,711	194,714	220,237	1,612,490	4,731,784
1886	1,523,496	1,537,331	165,760	397,249	1,670,146	5,293,982

*The tons of the total movement of articles on all the canals, etc.—(Concluded).*

YEAR.	Product of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total.
1887.	1,529,809	1,590,509	212,216	378,734	1,842,537	5,553,805
1888.	1,389,728	1,177,587	153,905	206,437	2,015,291	4,942,948
1889.	1,567,311	1,330,231	161,074	262,818	2,048,935	5,370,369
1890.	1,397,862	1,201,916	139,310	769,672	1,737,342	5,246,102
1891.	1,206,986	1,171,192	109,387	250,083	1,825,824	4,546,472
1892.	1,249,381	1,038,851	125,781	292,468	1,575,514	4,281,995
1893.	1,030,604	1,544,146	66,892	216,013	1,474,308	4,331,963
1894.	872,601	1,412,142	87,241	352,741	1,157,835	3,882,560
1895.	974,870	644,009	133,911	251,537	1,495,987	3,500,314
1896.	852,467	1,136,665	152,322	270,603	1,302,837	3,714,894
1897.	896,971	789,783	152,388	250,872	1,527,790	3,617,804
1898.	820,668	707,855	175,632	220,107	1,435,801	3,360,063
1899.	838,449	620,908	159,413	260,063	1,807,218	3,686,051
1900.	726,984	511,518	142,784	250,436	1,714,219	3,345,941
1901.	839,191	558,135	129,857	230,615	1,662,815	3,420,613
1902.	805,067	572,676	131,755	207,972	1,557,140	3,274,610
1903.	690,161	597,047	130,406	241,564	1,956,207	3,615,385
1904.	738,793	427,969	129,665	200,472	1,641,648	3,138,547
1905.	851,098	436,979	132,438	172,665	1,633,716	3,226,896
1906.	854,610	648,715	170,584	202,285	1,664,713	3,540,907
1907.	747,736	606,159	96,916	169,258	1,787,845	3,407,914
1908.	565,443	449,846	106,371	166,061	1,764,156	3,051,877

*Total tons of each class of articles which came to the Hudson river from the Erie and Champlain canals, from 1837 to 1908, both inclusive.*

YEAR.	Product of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total tons.
1837	385,017	151,469	10,124	394	64,777	611,781
1838	400,877	182,142	8,478	298	48,677	640,481
1839	377,720	163,785	8,565	499	51,559	602,128
1840	321,709	302,356	8,665	104	16,178	669,012
1841	449,095	272,240	17,891	155	36,953	774,334
1842	321,480	293,177	16,015	185	35,769	666,626
1843	416,173	346,140	29,493	201	44,854	836,861
1844	545,202	383,363	39,957	246	62,627	1,031,395
1845	607,930	447,627	49,812	253	99,321	1,204,943
1846	603,010	628,454	46,076	1,797	82,982	1,362,319
1847	666,113	897,717	51,532	4,831	124,090	1,744,283
1848	603,272	685,896	44,867	6,343	107,527	1,447,905
1849	665,547	769,600	44,288	5,873	94,638	1,579,949
1850	947,768	926,048	39,669	7,105	113,273	2,033,863
1851	913,268	891,420	52,302	4,580	115,581	1,977,151
1852	1,064,677	989,268	47,512	10,605	122,760	2,234,822
1853	1,340,261	932,189	52,817	12,633	167,897	2,505,797
1854	1,103,018	846,447	40,082	14,632	219,564	2,223,743
1855	877,805	782,604	44,844	15,559	174,781	1,895,593
1856	858,771	1,023,417	50,454	14,073	176,754	2,123,469
1857	798,986	561,894	55,611	16,987	183,709	1,617,187

*Totals tons of each class of articles which came to the Hudson River from Erie and Champlain canals, etc.—*  
*(Concluded).*

YEAR.	Product of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total tons.
1858.....	817,613	929,789	74,981	15,233	147,526	1,985,142
1859.....	1,123,607	610,317	63,079	15,804	308,865	2,121,672
1860.....	1,137,873	1,373,393	66,969	11,235	265,407	2,824,877
1861.....	690,586	1,934,247	43,074	8,405	303,832	2,980,144
1862.....	968,062	2,152,159	45,502	5,470	231,516	3,402,709
1863.....	1,049,559	1,898,253	56,268	5,123	265,524	3,274,727
1864.....	1,106,148	1,320,562	79,480	3,469	295,598	2,805,257
1865.....	1,051,616	1,379,831	58,211	4,302	236,721	2,730,181
1866.....	1,329,884	1,542,035	60,180	6,372	367,136	3,305,607
1867.....	1,359,287	1,143,712	77,250	5,196	444,250	2,029,695
1868.....	1,459,353	1,229,554	89,814	5,058	453,370	3,237,149
1869.....	1,453,419	1,087,105	84,623	4,122	465,873	3,096,142
1870.....	1,465,517	1,049,586	91,166	12,118	587,915	3,156,302
1871.....	1,347,979	1,571,754	94,911	7,603	473,554	3,495,801
1872.....	1,467,865	1,490,248	80,936	7,672	601,223	3,647,944
1873.....	1,308,471	1,421,469	46,421	12,091	588,197	3,376,649
1874.....	1,192,681	1,470,872	49,426	12,905	497,228	3,223,112
1875.....	813,275	1,175,495	70,209	8,341	541,457	2,608,777
1876.....	890,725	906,483	44,268	4,364	580,342	2,426,182
1877.....	978,366	1,362,700	53,545	5,341	586,860	2,986,812
1878.....	1,120,666	1,833,266	56,108	7,367	619,694	3,637,101
1879.....	1,043,970	1,710,539	46,928	15,299	469,440	3,286,176
1880.....	1,202,207	2,090,283	39,397	30,264	705,251	4,067,402

1881.....	1,367,938	1,165,347	53,013	15,466	464,085	3,065,839
1882.....	1,397,816	1,024,318	61,876	24,154	559,988	3,068,152
1883.....	1,403,174	1,234,463	47,910	27,798	449,152	3,162,497
1884.....	1,097,450	1,054,041	56,899	45,538	377,259	2,631,190
1885.....	1,284,213	949,870	61,912	48,185	371,039	2,715,219
1886.....	1,202,190	1,400,301	50,704	65,988	495,708	3,215,177
1887.....	1,206,279	1,412,166	52,566	21,710	466,202	3,158,923
1888.....	1,074,279	972,746	73,027	20,364	444,245	2,584,661
1889.....	1,065,747	976,660	75,250	16,428	489,751	2,623,836
1890.....	1,086,408	901,407	65,098	524,179	447,673	3,024,765
1891.....	817,228	980,612	51,524	53,924	383,549	2,286,855
1892.....	997,436	865,958	71,380	53,946	347,799	2,366,519
1893.....	784,052	1,384,103	37,972	46,526	313,192	2,565,845
1894.....	676,155	1,189,935	58,646	103,430	228,729	2,256,895
1895.....	649,605	442,595	96,356	40,306	374,883	1,603,745
1896.....	603,545	963,253	84,605	35,107	386,868	2,073,378
1897.....	634,618	633,753	108,871	32,830	486,146	1,878,218
1898.....	527,830	552,054	94,465	27,239	342,985	1,544,573
1899.....	584,668	465,266	114,659	17,771	482,853	1,665,217
1900.....	444,719	369,984	112,960	15,193	397,775	1,340,631
1901.....	382,822	429,356	75,803	11,257	355,165	1,254,403
1902.....	336,242	407,281	88,804	9,701	361,056	1,203,084
1903.....	296,425	417,418	111,132	7,617	325,947	1,158,539
1904.....	253,525	292,756	119,837	4,250	268,323	938,691
1905.....	328,517	302,173	116,057	6,446	317,150	1,070,343
1906.....	320,177	374,422	108,880	6,553	261,040	1,071,072
1907.....	232,625	329,707	65,680	5,357	236,252	869,621
1908.....	155,507	255,925	80,984	4,880	358,624	855,920

The tonnage of the canals for the season of 1908 was composed of the following described class of articles:

	Tons.
Product of the forest.....	565,443
Agriculture .....	449,846
Manufactures .....	106,371
Merchandise .....	166,061
Other articles .....	1,764,156
	<hr/>
Total tons .....	3,051,877
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Of this amount:

Erie canal carried.....	2,177,443
Champlain canal carried.....	614,762
Black River canal carried.....	85,812
Cayuga and Seneca canal carried.....	81,029
Oswego canal carried.....	92,831
	<hr/>
Total tons .....	3,051,877
	<hr/> <hr/>

*EXPORTS OF flour, wheat and corn from New York, Baltimore, Philadelphia, Boston, New Orleans and Montreal  
and the percentage of the exports from each port.*

	Flour, barrels.	Wheat, bushels.	Corn, bushels.	PERCENTAGE OF TOTAL EXPORTS AT PLACES NAMED.		
				Flour.	Wheat.	Corn.
New York.....	1880. 4,215,415	1880. 61,909,929	1880. 49,875,430	56.2	49.3	43.9
Boston.....	1,105,473	3,513,817	11,454,256	14.7	02.8	10.0
Philadelphia.....	288,656	12,342,492	18,172,396	03.8	09.9	16.0
Baltimore.....	525,985	33,678,376	15,244,895	07.0	26.8	13.4
Montreal.....	729,007	9,084,266	7,622,161	09.9	07.1	06.8
New Orleans.....	626,418	5,169,497	11,177,045	08.4	04.1	09.9
Total.....	7,500,950	125,698,377	113,546,183			
During the year 1880 the canals car- ried through freight going east....	17,166	29,285,366	39,154,785	00.2	23.2	34.4
New York.....	1881. 4,507,052	1881. 41,788,708	1881. 31,614,480	59.9	48.2	42.7
Boston.....	1,109,583	3,081,232	8,038,627	14.8	03.6	10.8
Philadelphia.....	190,842	8,860,522	6,799,457	02.5	10.2	09.2
Baltimore.....	437,701	19,682,935	12,650,303	05.8	22.7	17.2



*Exports of flour, wheat and corn from New York, etc.—(Continued).*

	Flour, barrels.	Wheat, bushels.	Corn, bushels.	PERCENTAGE OF TOTAL EXPORTS AT PLACES NAMED.		
				Flour.	Wheat.	Corn.
	1881.	1881.	1881.			
Montreal.....	632,821	6,554,622	3,359,084	08.4	07.6	04.5
New Orleans.....	642,460	6,707,982	11,508,685	08.6	07.7	15.6
Total.....	7,520,459	86,676,001	73,970,636			
During the year 1881 the canals car- ried through freight going east.....	.....	12,146,166	15,156,571	.....	14.0	20.3
	1882.	1882.	1882.			
New York.....	4,619,499	37,020,103	9,012,373	55.5	50.8	50.7
Boston.....	1,468,146	2,843,058	2,100,503	17.6	04.0	11.8
Philadelphia.....	246,147	5,759,947	839,024	02.9	07.9	04.8
Baltimore.....	490,734	17,465,976	1,126,055	05.9	23.8	06.4
Montreal.....	775,862	6,913,290	672,850	09.3	09.5	03.7
New Orleans.....	729,749	2,890,698	4,024,325	08.8	04.0	22.6
Total.....	8,330,137	72,893,072	17,775,130			
During the year 1882 the canals car- ried through freight going east.....	.....	18,901,666	7,270,607	.....	25.9	40.9

New York.....	1883. 4,330,146	1883. 20,049,200	1883. 22,222,754	56.3	43.6	44.5
Boston.....	1,766,172	694,384	4,634,509	22.9	01.5	09.3
Philadelphia.....	362,877	4,372,777	5,435,642	04.7	09.5	10.9
Baltimore.....	441,477	15,245,868	10,012,247	05.7	33.1	20.1
Montreal.....	776,242	5,008,167	4,530,731	10.1	10.9	09.1
New Orleans.....	22,061	651,430	3,061,224	00.3	01.4	06.1
Total.....	7,698,975	46,021,826	49,897,107			
During the year 1883 the canals carried through freight going east.....		16,466,633	16,799,321	.....	35.7	33.6
New York.....	1884. 3,907,021	1884. 28,687,362	1884. 11,862,158	51.6	49.4	38.5
Boston.....	2,173,842	1,692,081	4,247,071	28.7	02.9	13.8
Philadelphia.....	203,460	5,775,658	1,610,392	02.6	09.9	05.2
Baltimore.....	444,249	16,524,524	5,651,605	05.9	28.4	18.3
Montreal.....	844,019	3,967,457	3,316,053	11.2	06.9	10.8
New Orleans.....	Not reported	1,405,219	4,089,507	.....	02.5	13.4
Total.....	7,572,591	58,052,301	30,776,786			
During the year 1884 the canals carried through freight going east.....	213	24,322,200	5,638,357	.....	.....	.....

*Exports of flour, wheat and corn from New York, etc.—(Continued).*

	Flour, barrels.	Wheat, bushels.	Corn, bushels.	PERCENTAGE OF TOTAL EXPORTS AT PLACES NAMED.		
				Flour.	Wheat.	Corn.
New York.....	1885. 3,763,029	1885. 16,286,800	1885. 26,259,528	45.7	54.9	43.8
Boston.....	1,972,326	1,062,293	3,647,244	23.9	03.5	06.1
Philadelphia.....	695,287	3,369,915	6,028,564	08.4	11.1	10.1
Baltimore.....	1,093,098	4,575,262	13,752,196	13.3	15.1	22.9
New Orleans.....	25,158	96,930	7,825,641	00.3	00.3	13.1
Montreal.....	679,426	4,221,283	2,378,827	08.4	15.1	04.0
Total.....	8,228,319	29,612,483	59,891,800	100.0	100.0	100.0
During the season of 1885 the canals carried through freight going east..						
New York.....	1890. 3,417,399	1890. 12,549,946	1890. 24,550,165	.....	55.3	.....
Boston.....	1,289,197	497,889	4,590,085	.....	.....	.....
Philadelphia.....	844,480	699,274	16,844,797	.....	.....	.....
Baltimore.....	2,624,282	4,817,614	18,854,951	.....	.....	.....
Montreal.....	824,952	2,243,666	4,970,236	.....	.....	.....
Total.....	9,000,210	20,808,389	69,730,234	.....	.....	.....

New York.....	1891.	1891.	1891.	.....	.....
Boston.....	3,978,076	46,514,096	12,819,911	.....	.....
Philadelphia.....	1,560,673	2,196,782	3,946,411	.....	.....
Baltimore.....	1,156,342	6,876,608	2,782,678	.....	.....
Montreal.....	2,703,715	16,073,292	4,096,234	.....	.....
New Orleans.....	795,452	6,230,224	2,252,662	.....	.....
	52,015	10,336,496	1,912,173	.....	.....
Total.....	10,246,273	88,227,498	27,810,069	.....	.....
New York.....	1892.	1892.	1892.	.....	.....
Boston.....	6,034,260	45,259,966	18,293,353	.....	.....
Philadelphia.....	2,090,720	6,375,123	2,811,277	.....	.....
Baltimore.....	1,843,647	9,994,024	19,454,590	.....	.....
Montreal.....	3,661,643	16,661,559	18,995,907	.....	.....
New Orleans.....	601,243	8,379,562	1,763,854	.....	.....
	227,432	14,207,443	7,380,678	.....	.....
Total.....	14,458,925	100,877,677	68,699,659	.....	.....
New York.....	1893.	1893.	1893.	.....	.....
Boston.....	6,032,903	38,047,932	12,802,039	.....	.....
Philadelphia.....	1,855,471	3,934,125	5,505,966	.....	.....
Baltimore.....	1,376,434	5,657,398	3,985,406	.....	.....
Montreal, to November 1, only.....	3,331,374	13,048,702	7,486,403	.....	.....
	414,522	6,504,176	9,047,524	.....	.....
Total.....	13,010,704	67,192,333	38,827,338	.....	.....

*Exports of flour, wheat and corn from New York, etc.—(Continued).*

	Flour, barrels.	Wheat, bushels.	Corn, bushels.	PERCENTAGE OF TOTAL EXPORTS AT PLACES NAMED.		
				Flour.	Wheat.	Corn.
New York.....	1894. 5,814,657	1894. 21,612,790	1894. 10,329,787	.....	.....	.....
Boston.....	1,887,272	3,519,250	3,808,243	.....	.....	.....
Philadelphia.....	1,106,656	3,792,700	2,408,546	.....	.....	.....
Baltimore.....	2,725,321	7,875,548	7,064,799	.....	.....	.....
Montreal.....	654,192	5,502,128	2,104,912	.....	.....	.....
Total.....	12,188,098	42,302,416	25,716,287			
New York.....	1895. 4,009,157	1895. 18,348,193	1895. 17,891,140	.....	.....	.....
Boston.....	1,144,006	4,224,773	5,117,436	.....	.....	.....
Philadelphia.....	848,220	1,521,226	2,624,404	.....	.....	.....
Baltimore.....	2,315,196	3,880,536	7,252,590	.....	.....	.....
Montreal.....	1,341,752	3,827,201	2,462,306	.....	.....	.....
Total.....	9,958,331	31,801,929	35,347,876			
New York.....	1896. 4,817,439	1896. 18,476,263	1896. 19,160,190	.....	.....	.....
Boston.....	1,457,526	9,838,955	5,893,209	.....	.....	.....
Philadelphia.....	654,128	4,863,886	829,376	.....	.....	.....

Baltimore.....	3,065,845	6,589,856	26,382,182	.....	.....
Montreal.....	772,126	7,027,058	6,778,896	.....	.....
Total.....	10,767,064	46,796,018	58,983,853	.....	.....
New York.....	1897.	1897.	1897.	.....	.....
Boston.....	4,699,767	25,085,896	33,206,509	.....	.....
Philadelphia.....	1,208,731	9,592,108	9,424,644	.....	.....
Baltimore.....	815,181	4,801,606	25,140,487	.....	.....
Montreal.....	2,325,803	15,304,039	43,048,008	.....	.....
Total.....	585,813	9,899,308	9,210,222	.....	.....
Total.....	9,635,295	64,682,957	120,029,870	.....	.....
New York.....	1898.	1898.	1898.	.....	.....
Boston.....	4,738,214	49,909,158	39,632,273	.....	.....
Philadelphia.....	1,579,687	12,288,159	11,542,828	.....	.....
Baltimore.....	1,614,423	5,660,284	29,851,346	.....	.....
Montreal.....	2,813,166	18,542,034	45,096,477	.....	.....
Total.....	857,558	8,989,669	19,214,299	.....	.....
Total.....	11,603,051	95,389,295	145,337,223	.....	.....

*Exports of flour, wheat and corn from New York, etc.—(Continued).*

	Flour, barrels.	Wheat, bushels.	Corn, bushels.	PERCENTAGE OF TOTAL EXPORTS AT PLACES NAMED.		
				Flour.	Wheat.	Corn.
New York.....	1899. 4,741,035	1899. 26,830,386	1899. 40,429,477	.....	.....	.....
Boston.....	1,528,257	11,567,847	17,337,608	.....	.....	.....
Philadelphia.....	2,101,435	4,013,927	29,458,334	.....	.....	.....
Baltimore.....	3,367,485	9,549,270	46,786,127	.....	.....	.....
Montreal*.....	.....	.....	.....	.....	.....	.....
Total.....	11,738,212	51,961,430	134,011,546	.....	.....	.....
New York.....	1900. 4,487,306	1900. 18,259,428	1900. 43,532,024	37.24	31.70	26.22
Boston.....	1,606,175	11,028,357	14,072,326	13.33	19.15	8.47
Philadelphia.....	2,174,567	5,310,213	33,345,171	18.05	9.22	20.08
Baltimore.....	3,003,787	4,529,811	40,535,023	24.93	7.87	24.41
New Orleans.....	374,026	8,059,677	23,403,453	3.10	13.99	14.09
Montreal.....	403,385	10,408,501	11,168,489	3.35	18.07	6.73
Total.....	12,049,246	57,595,987	166,056,486	100	100	100
New York.....	1901. 4,092,711	1901. 27,140,388	1901. 23,831,380	33.10	23.76	26.03
Boston.....	1,496,163	17,910,887	10,331,712	12.10	15.67	11.28

Philadelphia.....	2,237,527	11,230,755	15,793,304	18.10	9.85	17.25
Baltimore.....	3,324,953	19,962,737	24,711,790	26.90	17.47	26.99
New Orleans.....	688,222	24,410,979	12,832,139	5.56	21.35	14.02
Montreal.....	524,494	13,594,686	4,059,790	4.24	11.90	4.43
Total.....	12,364,070	114,250,432	91,560,115	100	100	100
New York.....	1902.	1902.	1902.			
Boston.....	4,149,129	19,955,526	3,052,715	34.47	25.17	22.66
Philadelphia.....	901,325	8,454,795	804,038	7.50	10.66	5.97
Baltimore.....	2,521,791	8,816,457	2,423,437	20.95	11.12	17.98
Montreal.....	3,074,335	9,470,012	4,501,555	25.54	11.94	33.40
New Orleans.....	777,810	16,951,132	237,328	6.46	21.38	1.77
Total.....	612,290	15,643,745	2,454,128	5.08	19.73	18.22
Total.....	12,036,680	79,291,667	13,473,201	100	100	100
New York.....	1903.	1903.	1903.			
Boston.....	4,281,084	9,435,934	22,068,881	31.43	21	28.31
Philadelphia.....	767,044	2,867,994	6,627,107	5.63	6.38	8.50
Baltimore.....	2,664,177	1,600,790	9,994,838	19.56	3.57	12.82
Montreal.....	3,489,618	3,160,614	19,113,566	25.62	7.04	24.52
New Orleans.....	1,045,631	15,871,969	6,811,590	7.67	35.33	8.75
Total.....	1,374,344	11,989,273	13,332,213	10.09	26.68	17.10
Total.....	13,621,898	44,926,574	77,943,185	100	100	100

\* Not received.



*Exports of flour, wheat and corn from New York, etc.—(Concluded).*

	Flour, barrels.	Wheat, bushels.	Corn, bushels.	PERCENTAGE OF TOTAL EXPORTS AT PLACES NAMED.		
				Flour.	Wheat.	Corn.
New York.....	1904. 2,672,766	1904. 425,874	1904. 9,433,283	36.69	4.20	25.53
Boston.....	610,103	156,164	3,693,404	8.38	1.54	10.00
Philadelphia.....	1,256,151	8,000	6,169,968	17.24	0.08	16.69
Baltimore.....	1,281,266	140,262	7,706,237	17.59	1.39	20.84
Montreal.....	840,005	7,507,266	3,721,583	11.53	74.12	10.07
New Orleans.....	624,337	1,891,064	6,233,417	8.57	18.67	16.87
Total.....	7,284,628	10,128,630	36,957,892	100	100	100
New York.....	1905. 2,550,938	1905. 3,666,201	1905. 27,283,344	38.43	22.63	31.20
Boston.....	491,418	119,677	10,714,804	7.40	0.76	12.25
Philadelphia.....	1,264,227	640,448	7,647,880	19.04	3.95	8.75
Baltimore.....	1,226,033	1,304,456	15,415,604	18.47	8.05	17.63
Montreal.....	538,307	9,916,687	5,883,842	8.11	61.22	6.73
New Orleans.....	567,398	549,356	20,498,474	8.55	3.39	23.44
Total.....	6,638,321	16,196,825	87,443,948	100	100	100
New York.....	1906. 3,038,838	1906. 14,913,686	1906. 20,779,730	33.64	32.67	25.74

Boston.....	735,319	1,983,993	4,174,402	8.13	4.34	5.18
Philadelphia.....	2,011,441	4,749,586	9,408,537	22.27	10.40	11.66
Baltimore.....	1,547,891	4,138,389	24,611,513	17.13	9.06	30.49
New Orleans.....	996,825	5,583,993	17,294,135	11.04	12.23	21.43
Montreal.....	703,211	14,289,551	4,438,283	7.79	31.30	5.50
Total.....	9,033,525	45,659,198	80,706,600	100	100	100
New York.....	1907.	1907.	1907.			
Boston.....	3,045,125	22,769,338	21,253,050	32.09	31.39	32.72
Philadelphia.....	862,004	4,360,382	5,303,997	9.09	6.02	8.17
Baltimore.....	2,421,406	11,295,013	6,855,029	25.52	15.58	10.55
Montreal.....	1,823,407	8,057,570	19,829,427	19.21	11.11	30.52
New Orleans.....	861,936	20,949,496	4,830,251	9.08	28.88	7.44
Total.....	475,655	5,089,669	6,884,482	5.01	7.02	10.60
New York.....	1908.	1908.	1908.			
Boston.....	3,410,944	20,578,026	4,686,576	37.35	27.46	20.56
Philadelphia.....	726,632	2,533,460	1,022,338	7.95	3.40	4.46
Baltimore.....	2,299,149	11,731,982	1,626,381	25.18	15.66	7.15
Montreal.....	1,347,098	9,168,368	10,606,954	14.75	12.24	46.53
New Orleans.....	746,073	27,405,034	268,433	8.17	36.59	1.18
Total.....	602,838	3,477,388	4,586,461	6.60	4.65	20.12
Total.....	9,132,734	74,894,258	22,797,143	100	100	100

## STATEMENT of lockages during the season of 1908.

DATE.	ERIE CANAL.				
	Lock No. 1.	Lock No. 2.	Lower side cut.	Upper side cut, river lock.	Upper side cut, upper lock.
May.....	32	21	64	664	640
June.....	51	38	50	837	749
July.....	71	70	37	695	639
August.....	64	52	47	758	654
September.....	56	39	36	669	598
October.....	159	87	43	956	933
November.....	121	56	47	879	717
December.....	.....	.....	.....	18	24
Total.....	554	363	324	5,476	4,954

## Statement of lockages during the season of 1908 —(Continued).

DATE.	ERIE CANAL.				
	Lock No. 3.	Lock No. 45.	Lock No. 46.	Lock No. 49.	Lock No. 50.
May.....	629	646	680	642	616
June.....	645	722	983	910	719
July.....	638	734	1,021	988	754
August.....	691	839	1,037	1,100	841
September.....	634	789	938	918	778
October.....	927	1,026	1,093	1,142	984
November.....	780	912	961	941	785
December.....	8	.....	.....	.....	.....
Total.....	4,952	5,668	6,713	6,641	5,477

*Statement of lockages during the season of 1908 —(Continued).*

DATE.	ERIE CANAL.				
	Lock No. 66.	Combined locks, Lockport.	Tona- wanda lock.	Lock No. 72.	Junction lock.
May.....	437	468	398	527	8
June.....	695	546	965	700	59
July.....	630	544	1,359	810	34
August.....	715	613	1,549	694	29
September.....	606	567	1,064	752	28
October.....	835	819	546	988	36
November.....	696	955	304	824	89
Total.....	4,614	4,512	6,185	5,295	281

*Statement of lockages during the season of 1908 —(Continued).*

DATE.	CHAMPLAIN CANAL.			OSWEGO CANAL.	
	Guard lock.	Fort Edward lock.	Whitehall lock.	Lock No. 1.	Lock No. 13.
May.....	196	293	221	49	.....
June.....	430	471	384	335	120
July.....	387	598	572	222	7
August.....	392	816	870	643	243
September.....	346	635	550	386	128
October.....	395	612	474	290	99
November.....	221	376	306	183	46
Total.....	2,367	3,801	3,377	2,108	643

*Statement of lockages during the season of 1908 —(Concluded).*

DATE.	BLACK RIVER CANAL.	CAYUGA AND SENECA CANAL.			Caugh- denoy lock Oneida river im- prove- ment.
	Lock No. 1.	Monte- zuma lock.	Waterloo lock.	Mud lock.	
May.....	.....	130	130	164	171
June.....	249	172	179	254	375
July.....	293	271	222	313	561
August.....	300	322	267	363	728
September.....	286	217	196	255	378
October.....	285	165	137	165	343
November.....	207	90	96	106	266
Total.....	1,620	1,367	1,227	1,620	2,822

STATEMENT of the tons of property moved on each and all the canals, comprising the tons of total movement.

YEAR.	Erte.	Champlain.	Oswego.	Cayuga and Seneca.	Chemung.	Crooked Lake.
1837.....	667,151	261,659	161,353	20,274	20,288	24,258
1838.....	744,848	266,553	222,697	23,541	30,256	30,336
1839.....	845,007	263,552	221,300	26,300	36,089	26,823
1840.....	829,960	245,229	219,627	32,486	34,217	24,026
1841.....	906,442	276,418	135,689	34,634	63,042	33,030
1842.....	712,310	230,844	129,498	31,716	54,866	18,660
1843.....	819,216	262,212	240,571	25,998	66,247	31,856
1844.....	945,944	269,546	326,607	31,099	88,231	32,589
1845.....	1,038,700	266,922	340,481	46,464	114,740	39,489
1846.....	1,264,408	280,480	351,511	61,014	124,768	35,556
1847.....	1,661,575	313,124	441,096	58,204	189,165	36,318
1848.....	1,599,965	293,889	490,147	46,252	150,691	34,155
1849.....	1,622,444	321,345	557,637	40,440	135,867	36,317
1850.....	1,635,089	460,219	583,346	42,379	128,263	38,797
1851.....	1,955,265	513,793	676,321	37,084	159,563	29,399
1852.....	2,159,334	531,001	684,191	47,275	187,577	35,757
1853.....	2,198,308	608,354	761,276	58,793	249,980	53,985
1854.....	2,224,008	602,913	611,533	72,995	270,978	25,349
1855.....	2,202,463	537,108	654,399	76,744	223,271	25,850
1856.....	2,107,678	611,610	657,381	131,907	245,621	28,559
1857.....	1,566,624	547,236	605,218	120,435	187,201	16,571
1858.....	1,767,004	608,918	688,960	75,968	205,168	16,318
1859.....	1,753,954	751,046	612,390	80,602	256,323	17,933

*Statement of the tons of property moved on each and all the canals, etc.—(Continued).*

YEAR.	Erie.	Champlain.	Oswego.	Cayuga and Seneca.	Chemung.	Crooked Lake.
1860.....	2,253,533	681,157	1,080,076	98,678	226,051	14,723
1861.....	2,500,782	545,930	852,920	100,992	100,792	12,329
1862.....	3,204,277	647,318	1,063,413	125,659	243,628	19,632
1863.....	2,955,302	878,920	992,173	119,704	307,151	11,230
1864.....	2,535,792	846,790	765,079	185,161	280,834	6,316
1865.....	2,523,490	815,311	825,649	192,312	164,796	9,376
1866.....	2,896,027	1,001,493	990,809	368,223	226,510	12,189
1867.....	2,920,578	1,047,440	940,136	389,704	145,627	6,558
1868.....	3,346,986	1,120,585	958,444	515,295	165,875	4,451
1869.....	2,845,072	1,059,339	934,638	533,516	245,761	7,541
1870.....	3,083,132	1,143,719	917,728	527,728	206,535	15,825
1871.....	3,580,922	1,099,995	941,858	445,186	173,281	12,024
1872.....	3,562,560	1,449,528	832,490	386,977	217,263	7,145
1873.....	3,602,535	1,195,390	655,538	437,382	257,962	12,831
1874.....	3,097,122	1,268,292	665,408	378,825	205,602	9,286
1875.....	2,787,226	1,077,746	486,530	224,492	129,425	.....
1876.....	2,418,422	910,151	370,330	137,264	214,448	.....
1877.....	3,254,367	1,021,782	319,327	247,864	12,026	.....
1878.....	3,608,634	1,040,912	257,254	168,201	8,767	.....
1879.....	3,820,027	1,012,005	333,713	117,027	.....	.....
1880.....	4,608,651	1,200,503	427,863	125,331	.....	.....
1881.....	3,598,721	986,079	394,542	99,617	.....	.....
1882.....	3,694,364	1,097,343	445,295	123,448	.....	.....

1883.	3,587,102	1,366,358	276,350	134,631	.....
1884.	3,389,555	1,118,073	260,541	119,990	.....
1885.	3,208,207	1,139,402	213,079	64,125	.....
1886.	3,808,642	1,119,663	186,484	64,995	.....
1887.	3,840,513	1,229,335	176,177	195,933	.....
1888.	3,321,516	1,198,305	134,078	201,237	.....
1889.	3,673,554	1,187,038	170,078	196,138	.....
1890.	3,303,929	1,520,757	225,936	63,419	.....
1891.	3,097,853	1,101,126	161,426	80,954	.....
1892.	2,978,832	1,021,139	90,886	75,669	.....
1893.	3,235,726	848,965	92,634	38,761	.....
1894.	3,144,144	550,279	98,843	33,270	.....
1895.	2,356,084	966,335	64,154	49,050	.....
1896.	2,742,438	802,519	57,245	54,739	.....
1897.	2,584,906	797,637	53,537	110,277	.....
1898.	2,338,020	804,076	47,662	100,342	.....
1899.	2,419,084	1,034,315	49,373	113,476	.....
1900.	2,145,876	972,867	31,742	130,126	.....
1901.	2,257,035	885,641	43,210	166,258	.....
1902.	2,105,876	766,615	143,707	155,152	.....
1903.	2,414,018	801,649	184,434	116,918	.....
1904.	1,945,708	796,468	170,342	140,656	.....
1905.	1,999,824	833,550	178,777	123,927	.....
1906.	2,385,491	740,983	172,228	164,874	.....
1907.	2,415,548	678,506	143,277	112,570	.....
1908.	2,177,443	614,762	92,831	81,029	.....



*Statement of the tons of property moved on each and all the canals, etc.—(Continued).*

YEAR.	Chenango.	Genesee Valley.	Black River.	Onelda Lake.	Baldwinsville.	Total.
1837	8,213	.....	.....	.....	.....	1,171,296
1838	14,778	.....	.....	.....	.....	1,333,011
1839	16,928	.....	.....	.....	.....	1,435,713
1840	16,848	.....	.....	.....	.....	1,416,046
1841	23,356	13,653	.....	22,150	.....	1,521,681
1842	17,177	26,892	.....	.....	.....	1,236,931
1843	19,026	41,860	.....	.....	.....	1,513,439
1844	31,472	48,313	.....	26,445	.....	1,816,586
1845	38,305	65,077	.....	25,991	.....	1,977,565
1846	41,112	73,546	.....	28,808	.....	2,268,662
1847	44,051	87,614	.....	22,188	.....	2,849,810
1848	35,207	95,632	.....	30,642	.....	2,796,230
1849	36,557	98,467	.....	47,451	.....	2,794,732
1850	41,892	84,674	.....	59,451	.....	3,076,617
1851	40,307	89,804	.....	56,828	.....	3,582,733
1852	44,939	100,000	25,320	45,049	.....	3,863,441
1853	76,538	122,901	36,597	43,969	.....	4,247,853
1854	77,124	157,164	41,924	43,351	31,945	4,165,862
1855	89,390	158,942	55,525	34,532	32,608	4,022,617
1856	105,502	102,321	51,347	27,116	27,481	4,116,082
1857	96,722	113,731	68,126	18,485	.....	3,344,061
1858	72,526	114,576	69,135	19,343	.....	3,665,192
		118,303	62,353	19,675	.....	

1859	89,691	124,263	75,946	19,536	3,981,648
1860	83,635	123,602	70,687	18,672	4,650,214
1861	91,661	94,329	69,930	30,060	4,707,635
1862	79,442	129,974	85,442		5,598,785
1863	90,215	112,549	90,448		5,557,692
1864	89,021	71,411	72,519		4,852,941
1865	68,822	56,581	73,317		4,729,654
1866	107,472	86,579	85,908		5,775,220
1867	103,064	64,679	70,539		5,688,325
1868	112,455	138,364	79,770		6,442,225
1869	83,527	69,141	80,550		5,859,080
1870	102,820	79,733	96,329		6,173,769
1871	39,793	85,269	89,560		6,467,888
1872	26,519	96,113	94,776		6,673,370
1873	30,317	86,770	86,017		6,364,782
1874	33,059	69,393	77,601		5,804,588
1875	23,769	64,677	65,993		4,859,858
1876	6,227	47,360	67,927		4,172,129
1877		37,311	63,286		4,955,963
1878		18,569	68,983		5,171,320
1879			79,600		5,362,372
1880			75,308		6,457,656
1881			100,233		5,179,192
1882			106,933		5,467,423
1883			128,656		5,664,056
1884			116,359		5,009,488
1885			106,971		4,731,784
1886			114,198		5,293,982
1887			111,847		5,553,805

*Statement of the tons of property moved on each and all of the canals, etc.—(Concluded).*

YEAR.	Chenango.	Genesee Valley.	Black River.	Oneida Lake.	Baldwinsville.	Total.
1888.	.....	.....	118, 213	.....	.....	4, 942, 948
1889.	.....	.....	143, 561	.....	.....	5, 370, 369
1890.	.....	.....	132, 061	.....	.....	5, 246, 102
1891.	.....	.....	122, 111	.....	.....	4, 563, 472
1892.	.....	.....	115, 469	.....	.....	4, 231, 995
1893.	.....	.....	115, 877	.....	.....	4, 331, 963
1894.	.....	.....	56, 024	.....	.....	3, 882, 560
1895.	.....	.....	64, 691	.....	.....	3, 500, 314
1896.	.....	.....	57, 953	.....	.....	3, 714, 894
1897.	.....	.....	71, 447	.....	.....	3, 617, 894
1898.	.....	.....	69, 963	.....	.....	3, 360, 083
1899.	.....	.....	69, 803	.....	.....	3, 686, 051
1900.	.....	.....	65, 330	.....	.....	3, 345, 941
1901.	.....	.....	68, 469	.....	.....	3, 420, 613
1902.	.....	.....	103, 260	.....	.....	3, 274, 610
1903.	.....	.....	98, 366	.....	.....	3, 615, 385
1904.	.....	.....	85, 373	.....	.....	3, 138, 547
1905.	.....	.....	90, 818	.....	.....	3, 226, 896
1906.	.....	.....	77, 331	.....	.....	3, 540, 907
1907.	.....	.....	58, 013	.....	.....	3, 407, 914
1908.	.....	.....	85, 812	.....	.....	3, 051, 877

*Total value of articles moved on all the canals from 1837 to 1908, both years inclusive.*

YEAR.	Product of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total.
1837.....	\$6,146,716	\$16,201,331	\$6,390,486	\$23,935,990	\$3,134,766	\$55,806,288
1838.....	6,338,063	19,390,714	5,915,856	31,594,692	2,507,234	65,764,559
1839.....	7,762,553	17,056,911	5,989,576	39,493,764	3,096,960	73,399,764
1840 (G. Val. canal opened).....	4,609,035	19,644,481	4,719,054	35,636,943	2,694,379	66,303,892
1841.....	11,841,103	21,901,713	5,422,615	50,134,320	2,993,178	92,202,929
1842.....	5,957,219	16,987,843	4,435,289	30,042,153	2,594,104	60,016,608
1843.....	6,653,080	20,588,118	4,925,545	40,651,798	3,458,386	76,276,909
1844.....	7,422,737	23,379,643	6,151,806	49,224,099	4,472,867	90,921,152
1845.....	6,472,237	25,479,488	6,994,932	52,542,336	5,140,866	100,629,859
1846.....	6,422,409	35,820,586	7,015,311	62,004,488	4,349,315	115,612,109
1847.....	7,546,063	55,757,166	8,072,059	74,753,638	5,434,502	151,563,428
1848.....	7,219,350	42,850,086	7,433,957	76,945,463	5,637,301	140,086,157
1849.....	8,671,057	46,408,092	7,183,930	77,094,282	5,374,924	144,732,285
1850.....	15,117,661	46,152,958	7,933,108	81,135,199	6,059,003	156,397,929
1851.....	12,549,754	43,277,458	8,255,575	88,531,320	7,367,694	159,981,801
1852.....	11,526,636	49,437,555	6,294,120	122,624,170	6,721,236	196,603,517
1853.....	14,001,506	57,482,815	8,091,100	118,317,856	9,286,293	207,179,570
1854.....	14,384,785	51,980,864	9,796,420	123,367,863	10,954,380	210,284,312
1855.....	10,545,615	58,222,314	10,467,559	113,572,523	11,582,136	204,390,147
1856.....	10,211,383	51,030,453	10,308,419	135,691,816	11,084,991	218,327,062
1857.....	9,827,410	30,955,369	9,330,067	74,633,905	12,250,267	136,997,018
1858.....	8,983,443	50,142,318	9,352,955	61,236,319	8,873,809	138,568,844
1859.....	10,798,769	34,044,601	8,757,059	65,072,972	13,487,357	132,160,758

*Total value of articles moved on all the canals from 1837 to 1908, etc.—(Concluded).*

YEAR.	Product of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total.
1860.	\$10,654,710	\$55,838,977	\$8,113,177	\$84,252,425	\$11,989,909	\$170,849,198
1861.	6,462,614	37,861,720	6,718,273	49,707,729	9,365,557	130,115,893
1862.	11,305,954	84,239,870	12,314,651	83,640,903	11,733,453	203,234,331
1863.	13,421,909	101,090,511	13,044,051	91,417,513	21,072,477	240,046,461
1864.	22,589,060	116,051,564	22,582,718	80,391,550	32,785,747	274,400,639
1865.	21,011,122	83,670,467	18,095,266	102,627,877	30,832,372	256,237,104
1866.	28,754,821	86,610,934	18,389,992	100,169,211	37,038,718	270,963,676
1867.	28,997,470	81,616,663	16,877,334	108,545,569	42,939,676	278,956,712
1868.	24,039,591	76,383,656	17,298,574	131,786,764	55,793,344	305,301,920
1869.	21,930,655	55,528,825	13,595,892	103,464,505	54,761,407	249,281,284
1870.	22,266,184	49,231,912	10,777,897	94,852,911	54,707,269	231,836,176
1871.	27,309,303	68,130,282	10,881,540	78,898,185	53,548,381	238,767,691
1872.	35,599,734	49,541,259	7,659,547	93,997,415	34,115,366	220,913,321
1873.	18,651,838	60,194,909	5,979,656	76,173,336	30,715,761	191,715,500
1874.	17,840,356	64,344,898	7,094,531	64,477,540	42,916,997	196,674,322
1875.	12,478,669	50,540,911	6,311,137	40,885,448	34,792,410	145,008,575
1876.	11,132,966	32,439,857	3,375,119	31,069,375	35,073,062	113,090,379
1877.	15,574,893	46,765,635	10,911,786	46,130,795	21,028,903	139,411,963
1878.	12,703,074	52,264,813	17,834,755	70,433,563	29,021,323	182,254,528
1879.	12,053,499	56,826,653	37,173,222	144,653,500	34,573,762	285,280,726
1880.	14,351,622	68,994,219	14,236,227	109,870,264	40,392,459	247,844,790
1881.	18,399,932	43,440,343	11,863,021	75,331,308	13,148,961	162,153,565

1882.....	20,285,512	42,766,687	4,673,440	61,769,417	18,428,851	147,918,907
1883.....	18,038,056	39,727,973	3,426,474	68,281,320	18,387,400	147,861,223
1884.....	27,588,279	37,335,779	3,125,433	78,864,806	15,182,754	162,007,069
1885.....	17,302,705	31,404,325	2,827,280	58,215,252	9,786,627	119,536,389
1886.....	16,471,406	41,191,562	3,310,422	103,749,354	15,339,102	190,061,846
1887.....	15,568,667	42,729,624	4,808,178	82,161,364	13,978,084	159,245,977
1888.....	14,899,643	33,546,141	3,207,881	56,913,813	13,957,257	122,524,735
1889.....	17,012,190	30,014,906	5,908,500	80,590,288	21,058,338	154,584,222
1890.....	21,888,280	32,680,782	1,879,276	73,838,260	15,464,488	145,617,086
1891.....	17,923,469	38,566,171	1,147,639	47,008,705	11,623,269	116,269,343
1892.....	18,571,008	35,127,543	1,491,611	100,701,774	11,705,012	167,596,948
1893.....	14,421,877	50,483,054	853,407	75,474,765	13,597,991	154,831,094
1894.....	12,706,519	35,849,109	933,886	78,405,074	13,284,972	141,179,560
1895.....	14,504,441	17,185,539	2,489,514	38,648,131	24,625,396	97,453,021
1896.....	11,838,186	27,268,642	2,494,727	37,512,064	20,925,959	100,039,578
1897.....	11,780,232	16,722,091	1,932,216	42,299,589	23,329,210	96,063,338
1898.....	11,489,502	15,005,458	1,369,262	36,386,337	23,781,795	88,122,354
1899.....	14,312,288	13,428,551	1,555,810	40,752,834	22,737,229	92,786,712
1900.....	9,161,366	11,051,632	2,073,468	42,819,110	19,018,196	84,123,772
1901.....	10,697,001	15,036,822	1,773,198	37,467,681	18,504,178	83,478,880
1902.....	9,546,375	15,546,609	1,687,462	34,857,640	20,070,367	81,708,453
1903.....	9,726,311	15,812,570	1,835,315	34,613,801	15,725,328	77,713,325
1904.....	9,255,116	13,791,790	1,515,628	27,205,160	14,614,123	66,381,817
1905.....	11,640,382	13,875,972	1,589,118	19,292,625	11,520,489	57,918,586
1906.....	12,639,416	17,743,782	1,903,347	23,531,901	10,682,971	66,501,417
1907.....	11,032,348	22,069,011	1,146,417	19,957,084	9,699,110	63,903,970
1908.....	7,905,428	15,641,072	1,403,612	19,415,235	10,146,162	54,511,509

STATEMENT of total movement of flour, meal and grain on all the canals from 1861 to 1908, both inclusive.

YEAR.	Barrels wheat flour.	Barrels corn meal.	Bushels wheat.	Bushels corn.	Bushels oats.
1861.	1,667,416	2,176	33,171,900	25,024,643	6,105,313
1862.	2,102,574	18,416	37,579,967	27,225,643	6,550,187
1863.	1,930,731	44,704	26,577,166	222,087,056	16,040,937
1864.	1,474,582	51,305	19,932,067	11,086,536	15,122,937
1865.	1,271,129	24,018	14,433,566	20,689,500	11,973,939
1866.	751,870	27,972	10,989,800	28,904,143	12,138,250
1867.	569,234	12,808	13,630,300	17,930,500	10,476,000
1868.	575,900	14,861	14,425,567	18,437,100	11,927,250
1869.	657,807	12,666	22,351,133	9,159,643	5,769,312
1870.	509,055	22,250	21,950,800	6,893,893	7,371,312
1871.	381,583	6,611	23,951,633	24,002,033	8,118,187
1872.	190,129	6,046	13,463,433	32,241,179	5,809,938
1873.	181,731	9,342	26,768,800	22,760,571	4,376,437
1874.	269,759	8,314	25,738,766	18,542,964	3,713,000
1875.	163,287	3,000	24,809,766	10,072,536	3,919,813
1876.	86,019	2,232	13,879,200	13,044,786	3,259,188
1877.	82,621	3,120	14,934,766	25,837,786	4,127,812
1878.	54,666	5,666	28,151,866	26,249,750	5,314,313
1879.	66,333	8,130	31,648,866	22,185,000	1,447,750
1880.	76,537	12,620	32,201,733	41,307,821	1,305,812
1881.	64,129	13,370	14,827,733	16,993,679	1,895,063
1882.	86,777	17,370	21,407,196	8,988,821	1,386,250
1883.	83,768	1,777	19,124,666	18,677,785	3,225,438

1884.	67,138	343	26,346,966	7,079,143	3,293,500
1885.	63,602	703	18,864,066	12,866,500	514,625
1886.	83,296	5,435	33,270,966	12,670,178	454,875
1887.	37,861	65	31,228,000	15,950,607	2,210,312
1888.	30,463	2,629	19,373,366	17,846,464	4,445,562
1889.	40,555	1,713	16,137,900	21,162,536	3,980,000
1890.	32,046	10,740	11,789,700	21,998,000	2,961,437
1891.	28,900	.....	25,203,366	5,076,464	1,022,625
1892.	45,176	38,000	20,690,933	5,366,750	4,527,750
1893.	22,574	1,222	36,446,600	8,912,965	1,498,375
1894.	27,047	978	30,116,266	9,942,035	6,302,937
1895.	20,333	74	3,345,500	3,495,857	5,892,437
1896.	73,741	3,639	13,629,033	3,641,821	12,357,187
1897.	29,685	1,481	6,001,166	11,170,572	3,146,562
1898.	17,166	435	2,332,866	13,008,857	4,765,250
1899.	11,546	287	9,414,066	3,309,643	5,858,312
1900.	10,866	818	4,610,083	6,751,670	2,277,258
1901.	6,926	331	7,165,140	3,121,192	5,533,000
1902.	12,302	1,085	9,731,281	1,178,650	2,792,447
1903.	9,954	602	4,794,400	6,833,964	3,895,375
1904.	12,009	990	3,375,334	2,442,178	5,176,500
1905.	2,130	870	3,669,500	936,536	5,902,312
1906.	2,778	92	6,355,434	4,800,464	6,545,375
1907.	1,657	74	8,392,567	3,200,821	4,000,062
1908.	157	.....	6,122,200	2,525,036	3,813,190



*Statement of total movement of flour, meal and grain on all the canals, etc.—(Concluded).*

YEAR.	Bushels barley.	Bushels rye.	Bushels peas and beans.	Bushels malt.	Aggregate in tons.
1861.....	2,444,083	976,000	347,233	.....	2,070,251
1862.....	2,764,916	967,750	375,433	280,182	2,332,928
1863.....	3,816,458	592,571	530,700	366,242	2,021,505
1864.....	3,232,292	670,168	550,000	565,294	1,437,598
1865.....	5,336,416	1,220,714	401,533	725,151	1,530,037
1866.....	7,867,041	1,751,928	536,667	298,212	1,680,169
1867.....	4,972,250	1,044,643	827,133	489,818	1,322,774
1868.....	3,698,083	873,357	391,667	257,029	1,350,090
1869.....	4,125,500	481,750	379,233	330,400	1,221,397
1870.....	5,132,958	697,143	226,123	698,686	1,189,267
1871.....	4,749,662	1,234,392	162,700	801,371	1,759,882
1872.....	5,002,543	477,036	146,600	1,578,914	1,586,249
1873.....	2,941,083	1,077,143	393,300	1,182,466	1,660,981
1874.....	4,110,584	293,393	200,567	453,200	1,500,490
1875.....	4,353,125	296,750	195,200	71,287	1,238,115
1876.....	4,020,584	712,464	174,200	1,510,629	991,197
1877.....	5,810,542	1,283,857	162,533	718,800	1,439,665
1878.....	3,730,583	2,307,607	167,100	1,031,000	1,846,742
1879.....	4,006,000	2,114,643	124,466	582,706	1,770,846
1880.....	4,426,958	940,714	149,369	820,824	2,304,219
1881.....	3,399,458	553,000	101,334	887,526	1,074,545
1882.....	4,027,083	1,549,000	206,834	846,824	1,087,953

1883	2,449,291	3,401,643	43,666	952,706	1,329,099
1884	2,708,666	2,552,214	185,735	707,235	1,198,346
1885	2,691,135	364,678	70,000	604,706	1,028,260
1886	2,619,916	108,750	151,366	901,941	1,446,973
1887	3,144,083	239,892	14,133	781,588	1,498,304
1888	873,208	438,143	64,000	940,176	1,116,733
1889	2,754,541	1,289,357	694,333	1,640,588	1,277,118
1890	3,268,321	800,500	66,833	1,201,058	1,158,029
1891	2,995,958	2,456,107	87,996	662,325	1,072,375
1892	2,149,833	151,285	20,633	816,650	992,798
1893	2,207,250	232,785	42,933	309,118	1,435,540
1894	3,720,625	18,946	33,366	388,058	1,388,859
1895	3,255,458	7,322	15,766	166,000	583,754
1896	4,581,917	2,757,500	12,500	682,764	916,072
1897	4,180,708	2,370,964	10,733	1,037,941	731,213
1898	3,746,083	276,607	4,100	1,565,941	636,774
1899	3,276,125	211,821	800	473,823	562,740
1900	2,633,480	374,224	154	533,636	447,768
1901	2,311,597	368,796	1,334	471,050	465,426
1902	3,138,100	660,817	335	645,600	475,863
1903	2,993,208	429,536	1,767	731,706	495,005
1904	3,692,750	84,321	34	125,559	346,991
1905	4,035,292	132,750	567	362,648	337,815
1906	5,020,708	142,571	5,900	418,706	561,896
1907	3,837,583	76,950	267	817,706	513,754
1908	2,000,292	75,428	25,500	708,176	378,318

## STATEMENT of foreign exports of flour and grain from New York from 1861 to 1908.

YEAR.	Barrels wheat flour.	Barrels rye flour.	Barrels corn meal.	Bushels wheat.	Bushels corn.	Bushels oats.
1861.....	3,110,646	11,807	108,385	28,889,914	12,456,265	160,875
1862.....	2,961,518	8,397	132,606	25,564,755	12,020,848	210,669
1863.....	2,527,338	5,461	140,561	15,424,889	7,533,431	126,566
1864.....	1,918,393	2,840	105,142	12,193,433	846,831	42,135
1865.....	1,402,144	2,673	127,600	2,527,626	2,549,670	94,567
1866.....	900,084	7,552	149,773	522,669	11,079,394	1,190,583
1867.....	871,089	11,754	151,669	4,468,774	8,147,813	144,665
1868.....	1,003,968	7,459	191,011	5,762,037	5,989,225	94,707
1869.....	1,584,211	5,283	137,627	18,240,586	1,637,586	49,393
1870.....	1,950,234	.....	.....	18,446,035	487,792	28,986
1871.....	1,660,400	4,200	123,500	21,968,600	13,040,600	47,300
1872.....	1,216,082	6,399	194,040	13,144,400	25,292,200	31,739
1873.....	1,655,331	8,249	176,756	27,801,800	15,587,500	49,700
1874.....	1,177,608	8,473	168,603	34,791,249	19,000,995	122,528
1875.....	1,954,100	5,700	173,400	26,192,700	12,938,700	138,800
1876.....	1,887,441	5,778	172,042	24,144,033	16,610,232	620,536
1877.....	1,537,106	7,799	220,939	21,355,774	25,373,942	257,634
1878.....	2,630,437	4,375	202,788	55,019,389	27,440,771	3,658,905
1879.....	3,684,366	6,049	150,178	61,538,861	35,319,789	521,406
1880.....	4,215,415	5,205	203,716	61,908,029	49,875,430	427,959
1881.....	4,440,114	3,264	196,985	41,788,182	31,731,995	431,426
1882.....	4,623,965	.....	112,316	37,620,153	9,012,373	170,586
1883.....	4,330,146	.....	.....	20,049,200	22,222,754	162,665

1884.....	3,907,021	.....	530	28,687,362	11,862,158	2,456,219
1885.....	3,763,029	.....	152,488	16,286,800	26,259,228	6,198,302
1886, not reported.....		.....				
1887, to December 1.....	3,731,523	.....	105,735	40,893,437	11,920,425	142,938
1888, to December 1.....	3,476,991	.....	107,589	12,224,374	12,101,098	112,069
1889, to December 1.....	3,056,855	.....	135,006	9,627,444	27,380,443	885,257
1890.....	3,417,399	.....	136,432	12,549,946	24,550,165	9,301,046
1891.....	3,798,076	.....	160,533	46,514,096	12,819,911	3,205,466
1892.....	6,034,260	.....	163,765	45,259,966	18,293,353	2,650,639
1893.....	6,032,903	.....	159,149	38,017,932	12,802,039	5,177,007
1894, to December 1.....	5,814,657	114	178,346	21,612,790	10,329,787	219,844
1895, to December 1.....	4,009,157	.....	144,631	18,348,193	17,891,140	1,302,900
1896, to December 1.....	4,264,302	.....	140,449	16,864,330	16,845,658	14,794,568
1897.....	4,699,767	.....	272,975	25,085,896	33,206,509	34,714,008
1898.....	4,738,214	.....	366,663	49,909,158	39,632,273	23,765,046
1899.....	4,741,035	.....	407,691	26,830,386	40,429,477	12,943,153
1900.....	4,487,306	.....	444,943	18,259,428	43,532,024	8,819,441
1901.....	4,092,711	.....	317,920	27,140,388	23,831,380	8,457,228
1902.....	4,149,129	.....	187,004	19,955,526	3,052,715	1,803,663
1903.....	4,281,084	.....	439,174	9,435,934	22,063,881	669,423
1904.....	2,672,766	.....	250,204	425,874	9,433,283	269,670
1905.....	2,550,938	.....	277,154	3,666,201	27,283,344	6,489,616
1906.....	3,038,838	.....	205,203	14,913,686	20,779,730	5,218,147
1907.....	3,045,125	.....	197,047	22,769,338	21,253,050	280,751
1908.....	3,410,944	.....	173,934	20,578,026	4,686,576	145,341

*Statements of foreign exports of flour and grain, etc.—(Concluded).*

YEAR.	Bushels barley.	Bushels rye.	Bushels peas and beans.	Bushels malt.	Aggregate in tons.
1861.....	3,927	1,000,405	139,294	.....	1,599,261
1862.....	42,061	1,104,549	113,819	.....	1,477,221
1863.....	52,439	416,369	110,911	.....	980,675
1864.....	150	588	186,154	.....	614,642
1865.....	.....	198,348	88,899	.....	322,451
1866.....	1,329,842	248,646	282,992	.....	506,520
1867.....	886,893	473,260	680,763	.....	531,204
1868.....	90	152,993	189,226	.....	481,902
1869.....	.....	142,542	123,156	.....	788,075
1870.....	.....	92,431	151,102	.....	785,249
1871.....	98,700	525,800	90,900	.....	1,238,053
1872.....	22,066	668,030	156,609	.....	1,378,412
1873.....	19,400	1,069,100	143,500	.....	1,504,771
1874.....	3,560	641,661	463,193	.....	1,863,297
1875.....	1,500	206,900	364,900	.....	1,405,544
1876.....	88,097	1,336,283	716,428	.....	1,483,402
1877.....	2,412,509	2,049,796	487,031	.....	1,675,902
1878.....	1,518,922	4,048,841	476,184	.....	2,949,042
1879.....	147,867	3,941,638	393,153	.....	3,383,953
1880.....	254,833	2,181,183	654,669	.....	3,825,168
1881.....	15,477	1,068,928	218,370	.....	2,687,356
1882.....	6,616	1,980,586	572,567	.....	1,967,989
1883.....	8,939	4,467,853	.....	.....	1,819,284

1884.	76,343	4,846,088	770,729	1,413,686
1885.	408	493,319		1,759,840
1886, not reported.				
1887, to December 1.	46,189	356,817	185,877	2,193,962
1888, to December 1.	48	6,237	182,511	1,098,641
1889, to December 1.	226	809,405	244,246	1,440,719
1890.	275,313	1,351,726	371,814	1,652,144
1891.	1,869,569	4,448,675	668,069	2,421,816
1892.	235,206	3,254,849	663,927	2,698,507
1893.	257,744	439,459	473,796	2,282,685
1894, to December 1.	300	208		1,581,391
1895, to December 1.	42,743	246		1,521,886
1896, to December 1.	6,162,012	3,208,448		2,027,759
1897.	8,916,452	5,797,517		3,151,164
1898.	2,451,271	8,307,944	1,151,811	3,864,551
1899.	7,619,862	2,745,970		2,960,070
1900.	4,833,493	1,479,380		3,597,900
1901.	233,907	1,050,006		2,128,169
1902.	341,072	2,316,417	327,502	1,264,173
1903.	308,616	1,310,550	321,243	1,475,104
1904.	2,066,155	143	301,340	655,536
1905.	5,304,708	271,010	288,734	1,426,751
1906.	4,310,610	472,489	207,783	1,586,006
1907.	133,580	1,128,070	137,588	1,651,730
1908.	141,591	1,227,843	277,540	1,182,657

*TOTAL tonnage of all the property on the canals, ascending and descending, and the value for the seventy-two years preceding, is as follows:*

YEAR.	Tons.	Value.
1837.....	1,171,296	\$55,809,288
1838.....	1,333,011	65,746,559
1839.....	1,435,713	73,399,764
1840.....	1,416,046	66,303,892
1841.....	1,521,661	92,202,929
1842.....	1,236,931	60,016,608
1843.....	1,513,439	76,276,909
1844.....	1,816,586	90,921,152
1845.....	1,977,565	100,629,859
1846.....	2,268,662	115,612,109
1847.....	2,869,810	151,563,428
1848.....	2,796,230	140,086,157
1849.....	2,894,732	144,732,285
1850.....	3,076,617	156,397,929
1851.....	2,582,733	159,981,801
1852.....	3,863,441	196,603,517
1853.....	4,247,853	207,179,570
1854.....	4,165,862	210,284,312
1855.....	4,022,617	204,390,147
1856.....	4,116,082	218,327,062
1857.....	3,344,061	136,997,018
1858.....	3,665,192	138,568,844
1859.....	3,781,684	132,160,758
1860.....	4,650,214	170,849,198
1861.....	4,507,635	130,115,893
1862.....	5,598,785	203,234,331
1863.....	5,557,692	240,046,461
1864.....	4,852,941	274,400,639
1865.....	4,729,651	256,237,104
1866.....	5,775,220	270,963,676
1867.....	5,688,325	278,956,712
1868.....	6,442,225	305,301,929
1869.....	5,859,080	249,281,284
1870.....	6,173,769	231,836,176
1871.....	6,467,888	238,767,691
1872.....	6,673,370	220,913,321
1873.....	6,364,782	191,715,500
1874.....	5,804,588	196,674,322
1875.....	4,859,958	145,008,575
1876.....	4,172,129	113,090,379
1877.....	4,955,963	128,923,890

*Total tonnage of all property on the canals, etc.—(Concluded).*

YEAR.	Tons.	Value.
1878.....	5,171,320	\$182,254,528
1879.....	5,362,372	285,280,726
1880.....	6,457,656	247,844,790
1881.....	5,179,192	162,153,565
1882.....	5,467,423	147,918,907
1883.....	5,664,056	147,861,223
1884.....	5,009,488	162,097,069
1885.....	4,731,784	119,536,189
1886.....	5,293,982	180,061,846
1887.....	5,553,805	159,245,977
1888.....	4,942,948	122,524,735
1889.....	5,370,369	154,584,222
1890.....	5,246,102	145,761,086
1891.....	4,563,472	116,269,343
1892.....	4,281,995	167,596,948
1893.....	4,331,963	154,831,094
1894.....	3,882,560	141,179,560
1895.....	3,500,314	97,453,021
1896.....	3,714,894	100,039,578
1897.....	3,617,804	96,063,338
1898.....	3,360,063	88,122,354
1899.....	3,686,051	92,786,712
1900.....	3,345,941	84,123,772
1901.....	3,420,613	83,478,880
1902.....	3,274,610	81,708,453
1903.....	3,615,385	77,713,325
1904.....	3,138,547	66,381,817
1905.....	3,226,896	57,918,586
1906.....	3,540,907	66,501,417
1907.....	3,407,914	63,903,970
1908.....	3,051,877	54,511,509



*TOTAL GRAIN received at Buffalo each year since 1836, and total grain, including flour, received each year.*

YEAR.	Grain, bushels.	Grain, including flour, bushels.
1836.....	543,461	1,239,351
1837.....	550,560	1,184,685
1838.....	974,751	2,302,887
1839.....	1,117,262	2,302,851
1840.....	1,075,885	4,061,598
1841.....	1,852,325	5,692,525
1842.....	2,015,928	5,687,468
1843.....	2,055,025	6,642,610
1844.....	2,335,568	6,910,719
1845.....	1,848,040	5,581,790
1846.....	6,491,522	13,366,167
1847.....	8,688,187	19,153,187
1848.....	7,396,012	14,641,018
1849.....	8,628,013	14,665,189
1850.....	6,618,004	12,059,551
1851.....	11,449,661	17,740,784
1852.....	13,392,937	20,390,500
1853.....	11,078,741	15,956,525
1854.....	18,553,455	22,252,288
1855.....	10,788,473	24,472,277
1856.....	20,123,667	25,753,965
1857.....	15,348,930	19,578,690
1858.....	20,202,444	26,812,982
1859.....	14,429,069	21,530,722
1860.....	31,441,440	37,073,115
1861.....	50,062,646	61,460,601
1862.....	58,642,344	72,872,454
1863.....	49,845,065	64,735,510
1864.....	41,044,498	51,177,146
1865.....	42,473,223	51,415,188
1866.....	51,820,342	57,388,087
1867.....	43,499,780	59,700,060
1868.....	42,436,201	49,949,856
1869.....	37,014,728	45,007,163
1870.....	39,261,141	46,013,096
1871.....	60,765,357	67,155,742
1872.....	58,447,822	62,260,232
1873.....	67,340,570	73,636,595
1874.....	61,562,627	70,030,552
1875.....	65,194,716	74,246,726
1876.....	46,038,598	50,074,648
1877.....	61,734,071	66,199,291

*Total grain received at Buffalo each year, etc.—(Concluded).*

YEAR.	Grain, bushels.	Grain, including flour, bushels.
1878.....	79,176,152	84,046,052
1879.....	74,379,829	78,865,354
1880.....	105,453,372	112,042,927
1881.....	56,806,545	62,062,895
1882.....	50,833,590	56,830,340
1883.....	65,722,080	76,079,930
1884.....	56,963,970	70,041,520
1885.....	49,740,060	64,260,460
1886.....	72,514,840	95,425,790
1887.....	84,730,910	104,737,710
1888.....	73,223,500	99,448,150
1889.....	90,869,880	118,273,430
1890.....	89,312,800	120,540,700
1891.....	128,993,020	164,459,720
1892.....	133,039,090	181,769,690
1893.....	135,919,920	188,730,370
1894.....	103,959,165	161,401,815
1895.....	118,027,930	162,936,630
1896.....	163,431,814	214,352,734
1897.....	185,443,816	242,140,306
1898.....	221,383,945	273,242,210
1899.....	153,393,184	194,293,112
1900.....	157,655,969	209,239,824
1901.....	132,641,828	187,909,664
1902.....	124,626,548	184,759,518
1903.....	140,438,822	196,653,957
1904.....	100,838,000	131,642,842
1905.....	126,465,729	177,496,229
1906.....	136,096,528	187,403,448
1907.....	132,438,718	181,237,178
1908.....	114,245,418	153,336,618

*The following statement shows the receipts of flour, wheat and corn at Buffalo by lake for seventy-three years.*

YEAR.	Flour, barrels.	Wheat, bushels.	Corn, bushels.
1836.....	139,178	304,990	204,355
1837.....	126,805	450,359	94,490
1838.....	277,620	933,117	34,148
1839.....	294,125	1,117,262	.....
1840.....	597,142	1,004,561	71,337
1841.....	730,040	1,635,000	201,031
1842.....	734,408	1,555,420	453,520
1843.....	917,517	1,827,241	223,966
1844.....	915,030	2,174,500	137,978
1845.....	746,750	1,770,740	54,200
1846.....	1,374,529	4,744,184	1,455,258
1847.....	1,857,000	6,489,100	2,862,800
1848.....	1,249,000	4,520,117	2,298,000
1849.....	1,207,435	4,943,978	3,321,651
1850.....	1,103,039	3,681,347	2,593,378
1851.....	1,258,224	4,167,121	5,988,775
1852.....	1,299,213	5,549,778	5,136,746
1853.....	975,557	5,420,043	8,065,793
1854.....	739,756	5,510,782	10,108,983
1855.....	937,761	8,022,126	9,711,430
1856.....	1,126,048	8,465,671	9,633,277
1857.....	845,953	8,334,179	5,713,611
1858.....	1,536,109	10,671,550	6,621,688
1859.....	1,420,383	9,234,652	3,113,653
1860.....	1,122,335	18,502,615	11,386,217
1861.....	2,159,591	27,105,219	21,024,657
1862.....	2,846,022	30,435,831	24,388,627
1863.....	2,978,088	21,240,348	20,086,912
1864.....	2,028,520	17,677,519	10,478,681
1865.....	1,788,393	13,437,888	19,840,901
1866.....	1,313,543	10,479,694	27,894,798
1867.....	1,440,056	11,879,685	17,873,638
1868.....	1,502,731	12,555,215	16,804,067
1869.....	1,598,487	19,228,546	11,549,403
1870.....	1,470,391	20,556,722	9,410,128
1871.....	1,278,077	22,606,217	26,110,769
1872.....	762,502	14,304,942	34,643,180
1873.....	1,259,205	30,618,372	28,550,828
1874.....	1,693,585	29,778,572	24,974,548
1875.....	1,810,402	32,987,656	22,593,891
1876.....	807,210	19,324,612	20,939,853
1877.....	693,044	23,284,405	33,362,866
1878.....	911,980	35,419,136	35,133,853

*Receipts of flour, wheat and corn at Buffalo by lake.—*  
(Concluded).

YEAR.	Flour, barrels.	Wheat, bushels.	Corn, bushels.
1879.....	897,105	37,788,501	32,990,993
1880.....	1,317,911	40,510,229	62,214,617
1881.....	1,051,250	18,495,320	34,434,830
1882.....	1,199,350	26,050,030	21,664,530
1883.....	2,071,570	24,105,420	34,775,040
1884.....	2,615,510	2,469,710	18,538,340
1885.....	2,993,280	27,130,400	21,028,230
1886.....	4,582,190	41,430,440	29,155,370
1887.....	4,001,360	48,111,180	30,199,490
1888.....	5,244,930	27,548,110	36,422,270
1889.....	5,480,710	26,051,600	47,127,150
1890.....	6,245,580	14,868,630	44,136,660
1891.....	7,093,340	76,945,960	29,616,390
1892.....	9,746,120	78,243,560	32,377,780
1893.....	10,562,090	68,243,750	40,539,976
1894.....	11,488,530	50,194,130	29,078,520
1895.....	8,971,740	46,848,510	38,244,960
1896.....	10,384,184	54,411,207	47,811,010
1897.....	11,339,298	50,584,719	55,553,741
1898.....	10,371,653	83,872,837	67,950,073
1899.....	8,810,097	48,232,016	53,503,404
1900.....	11,463,079	47,826,458	63,192,660
1901.....	11,053,439	61,294,248	30,539,848
1902.....	12,026,616	62,452,696	22,487,454
1903.....	11,243,027	40,455,328	43,364,979
1904.....	6,160,965	26,270,000	27,898,000
1905.....	10,201,100	40,436,616	32,745,046
1906.....	10,279,384	55,544,832	25,976,478
1907.....	9,759,676	66,658,138	28,477,767
1908.....	7,818,248	63,857,080	13,779,988

*The following statement shows the receipts of oats, barley and rye at Buffalo by lake for seventy-three years.*

YEAR.	Oats, bushels.	Barley, bushels.	Rye, bushels.
1836.....	28,640	4,876	1,500
1837.....	2,533	.....	3,260
1838.....	6,577	.....	909
1839.....	.....	.....	.....
1840.....	.....	.....	.....
1841.....	14,144	.....	2,150
1842.....	.....	4,710	1,268
1843.....	2,489	.....	1,332
1844.....	18,017	1,617	456
1845.....	23,300	.....	.....
1846.....	218,300	47,530	28,250
1847.....	446,000	.....	70,787
1848.....	560,000	.....	17,789
1849.....	362,384	.....	.....
1850.....	357,580	3,627	.....
1851.....	1,140,430	142,773	10,652
1852.....	2,596,231	497,913	112,251
1853.....	1,580,655	401,098	107,152
1854.....	4,401,739	313,757	177,066
1855.....	2,693,222	62,304	299,591
1856.....	1,733,382	46,327	245,810
1857.....	1,214,760	37,844	48,536
1858.....	2,275,231	308,374	125,214
1859.....	394,502	361,550	124,693
1860.....	1,209,594	262,158	80,822
1861.....	1,797,905	313,715	337,764
1862.....	2,624,982	428,124	791,564
1863.....	6,322,187	641,440	422,309
1864.....	11,682,637	465,097	633,726
1865.....	8,494,799	820,563	877,677
1866.....	10,227,472	1,606,384	1,245,485
1867.....	10,933,166	1,802,598	1,010,693
1868.....	11,492,472	637,124	947,323
1869.....	5,459,347	651,339	126,093
1870.....	6,846,983	1,821,154	626,154
1871.....	9,006,409	1,942,928	1,095,009
1872.....	6,050,045	3,088,925	301,809
1873.....	5,972,346	1,232,507	906,977
1874.....	5,396,781	1,154,948	167,301
1875.....	8,494,124	906,889	222,126
1876.....	2,397,257	2,615,081	761,795
1877.....	4,279,229	1,652,568	1,155,003

*Receipts of oats, barley and rye at Buffalo by lake.—(Concluded).*

YEAR.	Oats, bushels.	Barley, bushels.	Rye, bushels.
1878.....	5,122,972	1,375,184	2,135,007
1879.....	1,101,794	600,740	1,884,802
1880.....	649,350	335,925	743,451
1881.....	3,565,737	282,510	22,210
1882.....	1,620,170	701,500	767,360
1883.....	3,226,900	583,800	2,830,830
1884.....	3,174,730	534,130	2,247,060
1885.....	767,580	577,230	309,370
1886.....	1,014,670	787,730	126,630
1887.....	4,656,280	1,459,420	304,540
1888.....	7,897,310	842,090	513,720
1889.....	4,309,800	1,474,570	1,906,760
1890.....	13,860,780	5,165,700	1,281,030
1891.....	12,454,150	4,373,120	5,603,400
1892.....	16,500,250	4,600,970	1,316,530
1893.....	20,700,150	5,791,460	644,590
1894.....	15,560,230	8,625,090	501,195
1895.....	21,943,680	10,253,440	787,340
1896.....	40,107,499	16,697,744	4,404,354
1897.....	59,815,210	12,858,741	6,631,405
1898.....	45,501,233	11,391,332	6,821,694
1899.....	26,423,358	15,008,426	2,804,643
1900.....	28,422,256	9,868,196	1,314,743
1901.....	21,438,545	7,687,239	1,256,284
1902.....	15,891,387	8,969,865	3,716,628
1903.....	30,976,088	10,681,655	3,216,983
1904.....	19,124,000	15,665,000	1,736,600
1905.....	25,733,094	14,618,495	688,450
1906.....	23,951,155	13,681,058	1,243,640
1907.....	11,272,858	11,264,101	1,313,154
1908.....	10,455,716	11,649,064	856,944



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